

The Effects of Status and Power on Leadership Emergence and Conflict in Teams:  
From a Structural Perspective

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## **Abstract**

In this dissertation, I have examined two important forms of informal social hierarchy - status and power - and have theorized their effects on leadership emergence and conflict in teams. I conducted two field studies using an employee sample from a consulting company in South Korea and a MBA student sample from a mid-western university in the United States. The findings suggest that status and power are related yet distinct concepts and have different impacts on leadership emergence and conflict in teams. Although both are positively related to leadership emergence during team formation stages, status has more effects on leadership emergence in teams that deal with highly uncertain projects. Power, however, has no effect on leadership emergence regardless of task uncertainty. The findings also suggest that status and power play important roles in team processes. Status affects members' expectations, which then lead to leadership behaviors. Team members who have high status at the organizational level but low status at the team level seem to experience more relationship conflict. Conflict is exacerbated when counterparts have high needs for status.

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## INTRODUCTION

Social hierarchy, the implicit or explicit rank order of individuals with respect to a valued social dimension, is a fundamental feature of social relations (Magee & Galinsky, 2008). Social hierarchy has two functions in organizations: 1) to establish order and coordination, and 2) to motivate employees to strive for promotion (Magee & Galinsky, 2008). Hierarchy provides clear social governance in groups by allowing leaders to assign tasks or allocate resources (Durkheim, 1997; Hogg, 2001; Magee & Galinsky, 2008), and it provides incentives for individuals to climb the organizational ladder to obtain greater compensation and comfort (Magee & Galinsky, 2008; Tannenbaum, Kavcic, Rosner, Vianello, & Wieser, 1974).

In this dissertation, I focus on status and power, the two most important bases of informal social hierarchy, status and power (Magee & Galinsky, 2008; They, 2000). Social status is defined as the extent to which an individual is respected or admired by others (Magee & Galinsky, 2008). People tend to gather information about a target individual's ability and expertise from direct interactions or interpersonal observations, and they tend to respect and admire those perceived to be highly competent (Ridgeway, Boyle, Kuipers, & Robinson, 1998). Social power is defined as control over valued resources in social relations (Magee & Galinsky, 2008). Individuals depend on more powerful individuals to obtain resources. Power and status are related but distinct constructs (Magee & Galinsky, 2008). Both social power and social status significantly affect employee behaviors, but empirical evidence has indicated that status and power levels have unique qualities and effects on employee behaviors (e.g., Blader & Chen,

2012; Hays & Bendersky, 2015). For example, high status individuals may show more helping and cooperative behaviors (Cheng, Tracy, Henrich, 2010; Willer, 2009) and willingness to take the perspective of others (Blader & Chen, 2012). In contrast, holders of power tend to act according to their own goals and interests (Hirsh, Galinski, & Zhong, 2011; Keltner, Gruenfeld, & Anderson, 2003).

The two functions of social hierarchy, coordination and motivation, are especially important in groups where roles or formal positions are ambiguous, where group tasks are confusing, or where work is poorly coordinated (Greer & Caruso, 2007; Overbeck, Correll, & Park, 2005). Teams that lack formal hierarchy provide an especially interesting context for studying status and power. Contemporary organizations are increasingly adopting self-managing teams as working units (Gerard, 1995). Consequently, status and power may be critical in coordinating tasks and motivating team members. Successful teams have clear hierarchical roles, while those lacking structure perform more poorly (Hackman, 1987). Well-designed team structure has a positive influence on a team's engagement in learning and continuous improvement (Bunderson & Boumgarden, 2020). Yet, self-managing teams often have limited formal hierarchical differentiation, formal order, or imposed coordination, so that status and power may critically affect how team members interact, manage tasks, and experience conflict.

First, functions of social hierarchy - establishing order and facilitating coordination - may play important roles in teams where individuals on a team emerge as leaders. In competitive environments, individuals claim a leadership role (e.g., individuals decide to initiate projects or to perform leadership behaviors) and others

consent to that individual's identity as a leader (DeRue & Ashford, 2010). In self-managing teams, members may assume leadership by taking advantage of social hierarchies that will grant the member the power to coordinate work and assign tasks.

Leadership emergence is an important research topic because of its critical influence on team processes and performance. Research regarding approaches to leadership emergence have predominantly focused on individual levels and have vastly explored facets such as personality, values, knowledge, and skills (Judge, Piccolo, & Kosalka, 2009; Zaccaro Kemp, & Bader, 2004). However, this approach focuses only on individuals' innate characteristics and fails to consider individuals' potential interactions with team and organization members. Consequently, I provide insights beyond the individual approach. For example, teams must continually check their direction and progress to confirm they are parallel with organizational directions. We cannot understand how self-managing teams form and function without considering individual positions in organizations. As a result, approaches that consider social interactions among team and organizational members can help scholars better understand leadership emergence in teams (Azumi & Hage, 1972).

Thus, a structural approach based on social interactions among organizational members can be especially useful in explaining leadership emergence in teams (Bryson & Kelly, 1978) because it can answer questions that an individual approach has not been able to answer. That is, studying social hierarchy, social networks, and interactions within and outside teams may reveal how leaders emerge in teams and how team members work together. Scholars have called for using a structural perspective for studying leadership in

teams (e.g., DeRue & Ashford, 2010; Grant & Parker, 2008; Magee & Galinsky, 2008). Individuals claim leadership by displaying qualities related to status or power, and others grant that leadership claim if they think aspirants' qualities are suitable for a team's success. Moreover, recent studies found different effects of status and power on fairness (e.g., Blader & Chen, 2012) and competition (e.g., Hays & Bendersky, 2015), and suggest that power and status may have different effects on an individuals' other behaviors. Depending on the types of task being performed by the team, qualities related to status or power may also differently affect whether individuals will emerge as team leaders. For example, individuals with different forms social hierarchy differently deal with uncertainty or risk in their team tasks - individuals with status are more likely to consider others' perspectives and opinions whereas individuals with power are not, and this may lead different leadership emergence in teams.

Second, another function of social hierarchy - motivating individuals - may cause conflict among team members in self-managing teams because social hierarchies are critical sources of perceived inequalities and conflicts (Muller, 1985). People in an organization have come to an agreement about each other's ranks in status hierarchies and in power hierarchies (Anderson, Srivastava, Beer, Spataro, & Chatman, 2006; Magee & Galinsky, 2008; Schmid Mast & Hail, 2004). As a result of this consensus, individuals in an organization get a sense of who is high in status or power in social relations. Lower ranking individuals are generally motivated to gain greater material and psychological rewards by achieving higher status and power (Magee & Galinsky, 2008; Tannenbaum, Kavcic, Rosner, Vianello, & Wieser, 1974), but efforts to achieve status and power

potentially create conflict among competing team members. Conflicts regarding tasks, relationships, processes, and status are common and costly in teams, and negatively affect trust, cohesion, job satisfaction, commitment, and team performance (De Drue & Weingart 2003; de Wit, Greer, & Jehn, 2012). Recently, structural, role-based conflict studies show that hierarchical positions can generate conflict among team members (e.g., Anicich, Fast, Halevy, & Galinsky, 2015).

The structural approach goes beyond investigating within-team processes to explore how social interactions outside teams affect within-team conflict. A structural approach broadens our understandings of the emergence of team conflict because the approach is based on social interactions among team and other organizational members, according to organizational roles. Conflict between team members may emerge when one member tries to assume leadership but other members do not comply.

Scholars have called for using a structural perspective in conducting conflict studies (e.g., Anicich et al., 2015; Magee & Galinsky, 2008). Relative hierarchical within-team positions may lead to disputes regarding ideas and relationships. Moreover, jealousy and rivalry can rise when some members acquire higher power or status (Greer, 2014). Diagnosing conflicts between team members can be complex because social hierarchy includes multiple status and power dimensions and multiple team and organizational levels, creating inconsistencies in hierarchical ranks and conflict. For example, team member A has high organizational level hierarchy and perceives being qualified for assuming leadership, but team member B may think that team member A has low team level hierarchy and thus A is not unqualified for the leadership role in the



team. Consequently, A and B experience conflict. In this sense, the current study looks into the relationship between status/power inconsistency and conflict at the dyadic level.

In my dissertation, I examine social hierarchy as it impacts leadership and conflict in self-managing teams. Previous studies have focused on individual characteristics related to leadership emergence and team conflict, but the person-based approach limits investigation into effects of social interactions outside teams. Going beyond an individual perspective and taking a structural perspective, I explore important and yet unanswered questions: 1) Do status and power affect leadership emergence in project teams? 2) Do status and power affect the types of project teams that individuals choose to lead? 3) Do status and power influence team member behaviors and ultimately the emergence of team leaders? 4) How do status-power inconsistency and organization-team level status (power) inconsistency affect process and relationship conflict between team members? I argue that individual structural positions in various social networks are the basis of the social hierarchy, status and power, and these two forms of social hierarchy determine whether individuals will emerge as leaders and whether conflict will rise in self-managing teams.

To answer the research questions, I conducted two field studies. Study 1 is based on data collected from project teams in a consulting company in South Korea. Study 2 is based on data collected from a sample of MBA student teams at a large mid-western university in the United States. Both organizations use self-managing teams but have unique complementary environmental elements. First, the Korean research institute maintains a formal organizational hierarchy, but any consultant can initiate an internal

project team. The setting allows me to answer two questions about status/power and leadership emergence as well as the effect of task type on status/power-leadership emergence relationship, related to the first function of social hierarchy - coordination: 1) How do informal status and power affect leadership emergence in project teams? 2) How do team task types affect the relationship between informal status/power and leadership emergence in project teams? Although Study 1 answers basic questions about who leads project teams, it fails to answer more nuanced questions such as which social hierarchy is related to which kind of leadership behaviors or how team members grant leadership. Therefore, in Study 2, I analyze an MBA student team sample that lacks formal hierarchy or leadership to examine questions about the distinct roles of status and power as well as the effects of status/power on conflict in teams, related to the second function of social hierarchy - motivation: 3) How do status and power affect task- and relations-focused leadership behaviors? 4) How do status-power inconsistency and organization-team level status (power) inconsistency affect process and relationship conflict?

My investigation extends previous research and contributes to the literature in several ways. First, going beyond an individual approach, I adopt a structural approach to investigate the effect of social hierarchy on leadership emergence and conflict in teams. Specifically, I expand the discussion from formal hierarchy to informal social hierarchy. Structural perspectives are being used increasingly to explore power and status in social hierarchies (e.g., Anicich, Fast, Halevy, & Galinsky, 2015; Blader & Chen, 2011; Hays & Bendersky, 2015), but the focus has been on formal organizational hierarchies and roles (e.g., Anicich et al., 2015), or experimental manipulations of status and power (e.g.,

Anicich, Fast, Halevy, & Galinsky, 2015; Blader & Chen, 2011; Hays & Bendersky, 2015). However, informal power and status emerge from interpersonal relationships over time, so manipulating power and status in the lab may fail to capture the essence of power and status. Instead, I conducted field studies to observe informal power and status based on actual social network ties rather than perceptions of power and status or laboratory manipulations.

Second, I expand the structural boundaries affecting the emergence of power and status. Previous studies looked at power and status within dyads or teams (e.g., Blader & Chen, 2011; Hays & Bendersky, 2015), but I consider the entire organization or cohort as the boundaries where power and status emerge. Specifically, I explore how organization-wide power and status affect team issues. Therefore, studying leadership emergence and conflict from a structural perspective can extend understandings of how interactions outside teams but within organizations may affect team member interactions. In addition, exploring the effects of multiple forms of social hierarchy at multiple levels suggests opportunities for further studies. Uncovering the consistency/inconsistency or interaction among multi-forms and multi-levels of social hierarchies will be useful for explaining other important team outcomes such as trust, job satisfaction, and performance.

Third, I identify the mechanism by which social networks affect leadership emergence. Many social network studies simply treat centrality in communication/advice networks as indicating leadership. Social network studies tend to focus on three areas: (1) leadership in networks, (2) leadership as networks, and (3) leadership in and as networks (Carter, DeChurch, Braun, & Contractor, 2015). Area 1 studies show that centralities in

advice/communication networks indicate power in the social hierarchy and are associated with leadership emergence. However, the extant literature has rarely delved deeply into the underlying mechanism explaining how and why various network centralities allow team leaders to emerge. I argue that central individuals are motivated by their power and status to claim leadership and that the centrality persuades other team members to grant the claims. The structural position gives the central individual power, status, and basis for claiming leadership. Previous interpersonal relationships with organizational network members persuade team members to willingly grant the claim.

Fourth, I add status to the social network discussion which has generally focused on power. By treating status and power distinctively, the current study enriches network perspectives. Most social network studies have focused on power (e.g., Krackhardt & Brass, 1994), partly because power and status concepts have been used interchangeably (Blader & Chen, 2011). Therefore, social hierarchy and social network discussions have failed to consider status as a distinctive construct, although some have begun investigating different effects of power and status (e.g., Anicich et al., 2015; Blader & Chen, 2011; Hays & Bendersky, 2015). However, they have failed to use rigorous measurements of social hierarchy, especially status, from a structural approach. Social network theory explains how various patterns of social arrangements and tie contents can capture relationships among employees (Wasserman & Faust, 1994). This perspective can be used to study status, which shares importance with power in the social hierarchy (Mannix & Sauer, 2006). Consequently, I will measure social power and social status

separately by using network centralities to provide a more fine-grained approach to differentiate the key independent variables - status and power.

## **SOCIAL HIERARCHY AND LEADERSHIP EMERGENCE**

In this section, I examine power and status as they affect leadership emergence. First, I briefly review studies showing how leadership emerges in teams. Second, I take a structural perspective to explore how status and power lead individuals to aspire to leadership roles. Next, I examine how team task uncertainty influences the relationship between status/power and leadership emergence.

Emergent leaders are generally defined as group members who have influence over team cohorts in terms of direction, motivation, and behavior (Zhang, Waldman, & Wang, 2012). From literature review, I identify differences and similarities in the definitions and features of leadership emergence in the current studies. Table 1 shows the definitions and features of leadership emergence in recent studies, and indicates how I synthesize features of leadership emergence into my studies. While leadership emergence in Study 2 is very similar to previous studies, leadership emergence in Study 1 is related to but diverges from other studies, most notably because (1) I study teams that have only one leader, while other studies consider multiple leaders or shared leadership; (2) I study formal leadership emergence where one of the team members becomes project manager, whereas other studies focus on leadership informally emerged without having a formal title; and (3) I study teams in which any organizational member can be a team leader, whereas other studies focus on teams that draw leaders from team members only.

Scholars are paying increasing attention to emergent leaders and question whether leadership is always a top-down organizational process (DeRue & Ashford, 2010). Instead, theorists have conceptualized leadership as a mutual leader–follower influence process (e.g., Bedeian & Hunt, 2006; Uhl-Bien, Marion, & McKelvey, 2007) emerging from social interactions among team members. If leader identity is social (Mead, 1934), then it is available to anyone (Kempster, 2006; Van Vugt, 2006). Thus, the mechanism allowing individuals to emerge as leaders is important to explore.

A few decades ago, leadership scholars emphasized that leadership emergence is a broad, complex topic involving many factors and requiring multiple perspectives (Azumi et al., 1972). Categories of variables affecting leadership emergence have been identified: (1) Individual variables including personality, skill, seniority, and ideology; (2) Process variables including patterns of succession, nature of accession, stages of leadership development, and degree of internal leadership involvement; (3) Structural variables including position levels, network structure differences, relative strengths and weaknesses, membership expectations; (4) Environmental variables including binding performance review, involvement by major outside individuals, interest group activity, media influences, and general external environment (Bryson & Kelly, 1978).

In searching for leadership emergence mechanisms in the private management sector, the individual perspective has dominated the research field. Leadership studies have mainly explored individual leadership qualities and have focused on the leader side (Emery, Calvard, & Pierce, 2013) and on variables of interest including personality (Lord, De Vader, & Alliger, 1986; Sedikides & Anderson, 1994), prototypes (Rosch,

1978), schemas (Fiske & Taylor, 1991), and exemplar representations (Smith & Zarate, 1992).

The individual approach dominated early leadership research (Zaccaro et al., 2004), but failed to capture a core factor: leader/follower relationships (Emery et al., 2013). Especially in teams where social interaction among members is critical, a structural approach is more useful for understanding how leadership emerges. In self-managing teams where social relationships are critical in team formation and functioning, an approach that deals with structural positions may be superior.

A structural perspective uniquely explains how power and status emerge in organizations. Social hierarchy may be achieved or ascribed (Arnoff & Wilson, 1985). Ascribed sources of power and status are innate and readily observable, such as gender or personality (Neubert & Taggar, 2004). Those individual-level ascribed sources of power and status, including gender, ethnicity, personality, and values, have been vastly explored as part of the pervasive individual approach (Judge, Piccolo, & Kosalka, 2009; Zaccaro Kemp, & Bader, 2004). In contrast, achieved status and power come from interactions in which individuals perform valued behaviors or contribute to groups or individuals in organizations (Neubert & Taggar, 2004).

Structural approaches have advantages over individual approaches. First, individual perspectives focus on innate and unchanging characteristics such as gender, age, and personality and on many individual-level concepts such as personality, values, knowledge, and skills, without considering interactions among leaders and team members. In contrast, a structural approach allows an examination of the impact of

multiple social hierarchical forms (e.g., informal power and status, and formal positions and roles) as well as the impact of social hierarchy at multiple team and organizational levels. A structural perspective indicates that hierarchical ranks or social networks depend on industry, corporation, company, department, and team boundaries which can change as social boundaries are altered, meaning that individuals can have multiple hierarchical ranks or social networks. The structural approach allows us to study questions that other approaches cannot answer, such as How do multiple forms/levels of social hierarchy affect leadership emergence? How does consistency/inconsistency among multiple forms/levels of social hierarchy affect team conflict?

A second important aspect is that the structural perspective allows a close investigation of team/organizational member relationships. A structural approach is based on the relational nature of leadership and is thus useful to explain how leader–follower relationships affect leadership emergence, which is beyond the individual perspective. Work design studies (e.g., Grant & Parker, 2008) have also begun to examine relationships and interactions in explaining how contemporary organizations design jobs, roles, tasks, and projects so that teams can collaborate across departments, fields, and even industries (Howard, 1995; Mohrman, Cohen, & Mohrman, 1995). Therefore, to better understand how leadership emerges, it is important to consider interpersonal interactions within teams and organizations.

However, scholars have rarely studied exactly how individual structural status and power positions influence leadership emergence. Leader identity becomes socially constructed and forms basic leader–follower relationships through an underlying process:



leaders “claim” an identity and followers “grant” it (DeRue & Ashford, 2010). In this sense, researchers have been encouraged to extend leadership theory by considering the impact of informal social structures in organizations (e.g., DeRue and Ashford, 2010; Grant & Parker 2009) such as social hierarchies (Blau & Duncan, 1967; Lenski, 1984) or social networks (Krackhardt, 1990). These approaches are suited for studying emergent leadership because they deal with patterns of relationships in organizations (Emery, Calvard, Pierce, 2013). Researchers have overlooked the role of social hierarchy, especially that of social networks in leadership, with a few exceptions (e.g., Brass, 1985; Neubert & Taggar, 2004). Because social networks affect interaction, feedback, and support among individuals, social networks are an emerging research area requiring continuing exploration (Grant & Parker, 2008; Kilduff & Brass, 2009). I argue that high status and/or power individuals are more likely to claim leadership in teams, and that followers may accede based on that power and status.

### **Social Hierarchy and Leadership Emergence**

In my dissertation, status is defined as the extent to which an individual is respected or admired by others (Magee & Galinsky, 2008). A similar, frequently used definition is that status indicates relative group standing based on prestige, honor, and voluntary deference (Kilduff, Willer, & Anderson, 2016). Status characteristics theory (Berger et al., 1977) explains that status is developed from expectations about competence and performance based on previous experiences (Berger, Rosenholtz, & Zelditch, 1980). The definition I chose best reflects the structural perspective, in that status is developed or based on relationships with or “by others” (Ridgeway & Walker,

1995). This definition is useful for understanding the development of hierarchy in self-managing teams where respect reflects member judgment (Magee & Galinsky, 2008). Definitions from other perspectives fail to capture the essential interpersonal relational aspect. Based on the literature review (see Table 2), I separate the definition of status from related concepts—attention/visibility/popularity—because they are a sub-dimension of status (Anderson et al., 2001). Low-status individuals can be highly visible token minorities; their scarcity makes them draw the most group attention (Kanter, 1977). Influence, another related concept, is a result of status (Magee & Galinsky, 2008).

In my dissertation, power is defined as control over valued resources in social relations (Magee & Galinsky, 2008). For example, low-power individuals depend on high-power individuals to obtain information or acquire larger budgets. Again, the words “social relations” allow this definition to best reflect the structural perspective, in that power determines dependent social relationships in organizations (Emerson, 1962). The definition also clarifies the roles of hierarchy in groups such as self-managing teams (Magee & Galinsky, 2008). The other definitions (Table 2) fail to capture the essence of social relations.

Power also has various definitions. A list of related concepts includes dependence (Emerson, 1962); the potential to influence via rewards, coercion, expertise, legitimacy, and individual characteristics (French & Raven, 1959); the ability to mobilize resources (Kanter, 1977); and the ability to influence others more easily and perform tasks more effectively (Anderson & Brion, 2014). I must clarify how my definition of power differs from the frequently studied concepts of influence, legitimate power, and referent power

(French & Raven, 1959). Influence, again, comes from power (Magee & Galinsky, 2008).

I conceptualize the legitimacy of power as a separate variable, independent of informal social power. For example, position rank in the formal hierarchy is a source of legitimacy. Referent power, the extent to which others want to associate with an individual, overlaps more with the definition of status, perhaps with a popularity dimension, than with the definition of power used in this study.

Researchers have provided broad overviews of how social hierarchy based on power and status predicts workplace variables such as job satisfaction and influence (Magee & Galinsky, 2008). The current power/status and leadership in small groups literature provides key insights showing that (1) power/status explain leadership effectiveness, but their role in leadership emergence is unclear, and (2) the individual approach rather than the structural approach has dominated studies of power/status and leadership.

Most studies focus on how power and status affect leadership and team outcomes, and have heavily investigated the relationship between power/status and *leadership effectiveness*, but not the relationship between power/status and *leadership emergence*. In previous discussions about charismatic or transformational leadership and team outcomes, power and status were related to leadership effectiveness (e.g. Baldwin & Bedell, 1997; Mehra, Kilduff, & Brass, 2001; Pfeffer, 2011). Social networks and leadership effectiveness have also been studied. Levi, Torrance, and Pletts (1954), for example, argued that central leaders tend to have more effective teams. Others have argued that leaders who are centrally located in friendship networks may negatively

affect team performance because they must maintain too many relationships (Boyd & Taylor, 1998). Despite the lack of consensus about the impact of centrality on leadership effectiveness, the area has been greatly discussed. Although the relationships between power/status and leadership effectiveness and between social networks and leadership effectiveness have been studied frequently, few studies have investigated the relationships between power/status and leadership emergence and between social networks and leadership emergence. A few studies argue that social networks are associated with leadership emergence (Carter, DeChurch, Braun, & Contractor, 2015). For example, individuals with social connections tend to obtain leadership positions (Brass, 2001; Brass & Krackhardt, 1999). However, this argument has been rarely tested empirically. Indeed, we have little consensus about power and status effects on leadership emergence in teams.

I argue that social hierarchy also enables individuals to play team leadership roles. Individuals are motivated to claim leadership because leaders are socially valued and rewarded (Magee & Galinsky, 2008). They may receive instrumental rewards such as compensation and promotions as well as psychological rewards of recognition, admiration, reputation, and prestige (DeRue & Ashford, 2010). In certain settings, official team leaders emerge when the team first forms. Individuals who possess qualities that fulfill members' expectations for the team task tend to emerge as leaders. For example, in academia, committee chairs are often chosen before members are asked to join a committee. In some consulting firms, project leaders are assigned before teams are assembled.

I propose that the claiming/granting process is the mechanism explaining how leadership emerges in teams, as DeRue and Ashford (2010) suggested. Their theory suggests that leadership emergence occurs in competitive environments where aspiring leaders first claim leadership identity by initiating projects or enacting other leadership behaviors. Team members then either accept the aspirant's identity as leader or resist the claim. In the leadership/followership identity construction process, the aspirant establishes claim to leadership repeatedly and team members continually grant the claim until team members easily recognize and accept the leadership identities. Related studies have used this negotiation process framework. For example, De Rue (2011) tested the emergent leader/follower identities process by examining repeated leader/follower interactions. Fairhurst and Uhl-Bien (2012) examined this relational process using a unique methodology called organizational discourse analysis (ODA). Uhl-Bien, Riggio, Lowe, and Carsten (2014) also explored the process from followers' viewpoints.

I uniquely contribute to the current literature by exploring leadership emergence from a structural perspective to investigate the roles of power and status as the antecedents of leadership emergence. Claiming and granting processes are based on: "(1) implicit theories of leadership that refer to individuals' beliefs about what makes someone an effective leader, (2) the motivational risks and rewards associated with claiming or granting leader identities, and (3) the structures that can impose leader and follower identities in group settings" (DeRue & Ashford, 2010, p. 637). My claiming/granting arguments are based on the third "structure" in which leadership emergence is focused on the leaders and followers involved and the leading/following

process is based on relationships and social structures. I argue that team members recognize the aspirants' qualities associated with their informal social power/status and then grant the leadership accordingly.

### **Status and Leadership Emergence in Project Teams**

I argue that individuals who have higher status rankings are more likely to be in leadership positions than individuals lower in status. Social status is defined as the extent to which an individual is respected or admired by others (Magee & Galinsky, 2008). People tend to gather information about a target individual's ability and expertise from direct or observed interpersonal interactions (Ridgeway, Boyle, Kuipers, & Robinson, 1998). They tend to respect and admire those who exhibit high competence. High social status tends to be self-reinforcing by generating (1) opportunities for advancement, and (2) expectations for behaviors that fit with status advantage (Magee & Galinsky, 2008).

First, respected individuals are likely to have better opportunities (Merton, 1968; Ospina, 1996) to choose the best jobs or positions. For example, an opportunity to conduct high quality research is more likely to be given to a PhD student from a more prestigious undergraduate school than to a student from a lower status school. At the same time, high status individuals will be more likely to claim rather than grant leadership. Second, potential leaders are expected to behave in ways that are consistent with their status. Social interactions are most harmonious when individuals act consistently with their position in the social hierarchy (Magee & Galinsky, 2008). High-status individuals must behave in ways that are parallel with the social hierarchy to maintain admiration and status (Flynn et al., 2006; Magee & Galinsky, 2008). Respect is

strongly based on perceptions that the admired individual is competent. In team activities, team members expect that high status individuals will support, encourage, and motivate the team—all competencies inherent in potential leaders. Individuals who behave inconsistently or inappropriately with expectations are often negatively evaluated and socially rejected (Magee & Galinsky, 2008), and lose their status. The ultimate result of the opportunities for advancement and expectations for behavior is that high-status leads to the likelihood of claiming team leadership by initiating projects.

The leadership emergence process requires that aspirants claim leadership and that team members grant the claims. Followers tend to select leaders from members who (1) contribute in ways that satisfy members' needs, (2) fulfill roles necessary for successful team functioning, and (3) act in accordance with socially defined leadership expectations (Mann, 1959). The first and third qualities closely fit the relationship between status and leadership emergence. First, high status individuals tend to act competently, as team members would expect leaders to do. Because high status individuals have more advancement opportunities, they are more likely than low status individuals to actively initiate discussions or team projects. More important, they are better able to satisfy team members' needs. They tend to focus on their interpersonal relationships (Blader & Chen, 2012; Galinsky et al., 2008), to consider others' needs (Blader et al., 2013; Galinsky et al., 2006), and thus engage in helping and cooperation behaviors (Cheng, Tracy, & Henrich, 2010; Willer, 2009). As team members observe those behaviors, they are more likely to grant leadership to high status individuals. Although most team members would like to acquire the benefits that come with

leadership, high status individuals would be more motivated to claim the role.

Simultaneously, team members would be more likely to grant their leadership claims.

Therefore, I hypothesize:

*H1. Individuals with high informal status are more likely to be leaders of project teams than individuals with low informal status.*

### **Power and Leadership Emergence in Project Teams**

Power is also an important predictor of leadership emergence. Social power is defined as control over valued resources in social relations (Magee & Galinsky, 2008). Individuals who lack power depend on those in power to obtain more information or larger budgets. Power is similar to status in being self-reinforcing through (1) participation/influence and (2) confidence. First, powerful people are more likely than those who lack power to voice concerns in group activities (Brown & Levinson, 1987) and to openly express their opinions (Anderson & Berdahi, 2002; Berdahl & Martorana, 2006). When leadership positions are open, they are more likely to claim leadership without hesitation. Second, they are more likely to make choices confidently and to be more action-oriented (Anderson & Galinsky, 2006; Magee & Galinsky, 2008). They also tend to make the first offers in bargaining contexts (Magee, Galinsky, & Gruenfeld, 2007). In the leadership claiming process, they may find it easier to talk with potential followers, to be first to confidently claim the leadership position through goal-directed action (Galinsky et al, 2003; Magee & Galinsky, 2008). They will have better access to resources and will be more likely to recognize issues, devise solutions, and provide



opportunities for group improvement (Baldwin, Bedell, & Johnson, 1997; Magee & Galinsky, 2008). That is, they are more likely to claim leadership by initiating projects.

Mann's (1959) arguments can be applied to explain how team members grant leadership status to high power individuals. Mann's second observation—that leaders are chosen from those who can fulfill roles necessary for successful team functioning—fits closely with the logic. When team members select their leaders, they consider whether the leader can successfully lead the team toward achieving its goals. They evaluate whether the potential leader takes initiative, connects ideas to action plans, and can provide resources needed for team activities. High powered individuals are action-oriented, especially regarding goal-directed actions (Galinsky et al., 2003). They participate actively and lead team discussions confidently. Consequently, team members are more likely to grant high powered aspirants the leadership role. In sum, while most team members want to be team leaders, high powered individuals are more motivated to claim leadership, and team members are more likely to grant their claims. Therefore, I predict:

*H2. Individuals with high informal power are more likely to be leaders of project teams than individuals with low informal power.*

### **Task type Effects on the Social Hierarchy–Leadership Emergence Relationship**

I have argued that both status and power motivate aspirants to claim leadership and motivate team members to grant them that role. However, we might still ask whether individuals with status and individuals with power will want to lead different types of

teams. In this section, I analyze what types of teams or projects high status individuals and high power individuals are more likely to lead.

Power and status are obviously related but different concepts. Both are relational variables that form the foundation of hierarchical ranks in organizations (Magee & Galinsky, 2008). Power and status are both forms of social hierarchy with the same functions: (1) establishing order and coordination and (2) motivating individuals. They often appear in tandem. That is, “Powerful individuals also have high status if and only if respect is conferred on them for having asymmetric control over valued resources... Status can also lead to the acquisition of power... individuals who are respected are often entrusted with valued resources” (Magee & Galinsky, 2008, p. 364). Power brings status and status brings power, but the process takes time: sometimes individuals have a great deal of status (or power) but little power (or status).

To confront power/status inconsistency, I treat power and status as two variables to strengthen my arguments about distinctive effects of power and status. Thus, I include power as a control variable in the models to test the effect of status on leadership emergence and include status as a control variable in the models to test the effect of power on leadership emergence. The procedure will allow me to find the net effect of power (and status) on leadership emergence.

Individuals who have power have control of resources; individuals who have status are admired (Magee & Galinsky, 2008). As such, status is associated with people-related antecedents such as reputation (Anderson & Shirako, 2008) and impressions (Blader & Chen, 2012). In contrast, power is associated with resources/task-related

antecedents such as resource dependency (Salancik & Pfeffer, 1978) and action-oriented, goal-directed behavior (Galinsky et al., 2003).

Table 2 shows a list of the antecedents and consequences of power and status according to research that separates the two types of social hierarchy. Power and status have different effects on behaviors: high status has been associated with greater fairness and attention to others, while high power has been associated with unfairness and goal/task-centeredness (Blader & Chen, 2012). Status hierarchies are likely to be seen as more mutable than power hierarchies (Hays & Bendersky, 2015): different qualities related to power and status generate different outcomes. That is, control over resources is embedded in the exchange of resources, while respect and admiration are based on interpersonal relationships beyond the scope of the formal hierarchy. Consequently, previous studies suggest that power and status may have different effects on individuals' other attitudes and behaviors. I argue that individuals with different forms of social hierarchy, status and power, will emerge as leaders of different teams depending on the tasks that team performs, specifically, that have high or low task uncertainty.

In my investigation, I focus on the relationship between social hierarchy and team dynamics, so I will consider only teams that deal with conceptual or intellectual tasks rather than behavioral/action tasks and only groups that require group interdependence or cooperation rather than competition or contest/battles. Specifically, I will focus on self-managing project teams where indeterminacy can be the core concept that differentiates team task types.

Self-managing project team's task is broad, complex, and requires skillful scanning of the external and internal environment (Gulati, Mayo, & Nohria, 2013). Thus, teams encounter difficulty in providing suggestions that cover all factors in the business environment. Projects are highly risky and in danger of failure. In a literature that deals with "open vs. closed" task type (e.g. Baldwin, Ford, & Blume, 2009; Blume, Ford, Baldwin, & Huang, 2010; Salas, Milham, & Bowers, 2003; Yelon & Ford, 1999), the two task types are described: (1) Closed tasks typically have one correct answer, assess specific pieces of knowledge or a specific skill set or procedure, and provide limited opportunities for team members to demonstrate higher levels of understanding; (2) open-ended tasks typically have a range of appropriate responses, assess a range of knowledge or skills, and give team members opportunities to demonstrate higher levels of understanding. In addition, task uncertainty is defined as a lack of predictable inputs, processes, and outputs when the work is performed (e.g., Cordery, Morrison, Wright, & Wall, 2010; Griffin, Neal, & Parker 2007; Kim & Burton, 2002; Wall, Cordery, & Clegg, 2001).

My literature review revealed that the concept of "task uncertainty" captures the core concept of indeterminacy and is thus most appropriate for differentiating task types in my research. Task uncertainty is a broad notion that includes the ideas of (1) open–closed tasks in which various appropriate outcomes are possible, and team members must have broad knowledge and skills, and (2) task uncertainty, which is also related to risk and "the likelihood that a task will fail and require re-work" (e.g., Kim & Burton, 2002).

In sum, I focus on task uncertainty, a critical dimension that classifies task types (Dess & Beard, 1984) that may vary meaningfully. Depending on the types of task being performed by the team, qualities related to status or power may also differently affect whether individuals will emerge as team leaders. All self-managing project teams would have high task interdependence, task complexity, task significance, and autonomy, but task uncertainty may vary from low to high depending on projects. Therefore, I will use task uncertainty to differentiate team task types, and to show that task uncertainty may change the relationships of power/status with leadership emergence.

### **Status and Leadership Emergence under High Task Uncertainty**

Teams tackling highly uncertain tasks have a range of appropriate responses and need a wide range of knowledge, skills, ideas, opinions, and perspectives from all team members. Because of their tendency to focus on interpersonal relationships, to consider the needs of others, to engage in helping and cooperation, and to consider others' perspectives and opinions, high status members are the ones most likely to give team members the development and mentoring they desire (Blader & Chen, 2012; Blader et al., 2013; Cheng, Tracy, & Henrich, 2010; Galinsky et al., 2006; Galinsky et al., 2008; Willer, 2009). Teams confronting high task uncertainty face greater risks of task failure. When difficulties rise, warm, involved, and considerate high status individuals are more likely to help. Therefore, high status individuals would choose to lead project teams facing high uncertainty, while team members would consent to their leadership.

Powerful individuals might seem to be ideal for teams facing high uncertainty because powerful leaders can use their vast resources to find appropriate solutions.

However, power is more useful for teams facing highly complex rather than uncertain tasks. If leaders lack clear direction and attempt to utilize resources alone, they will be a burden, not a help, because using resources without clear direction can be waste and make it more difficult to change direction in case a leader makes a mistake. Moreover, when difficulties rise, powerful leaders may blame rather than support other team members because powerful leaders tend to express attitudes and emotions straightforwardly (Brinol et al., 2007). In other words, powerful leaders may fail to provide consideration or patience, and will instead focus on the task. Even more detrimental case is that those high-power leaders derogate (Overbeck & Park, 2001) or threaten subordinates (Mead & Maner, 2012) when they actually need more ideas and suggestions to perform high uncertainty tasks. Therefore, individuals with high power may be less suitable for teams dealing with high uncertainty.

*H3: Individuals with informal status are more likely to be leaders of project teams performing tasks of high uncertainty than individuals with informal power.*

### **Power and Leadership Emergence under Low Task Uncertainty**

Team tasks of low uncertainty can be solved in a few desirable ways, and thus require that leaders have specific knowledge or skills. In teams performing tasks of low uncertainty, or clear tasks, team members expect leadership that provides compelling solutions and action plans. What is required in these teams is a leader with initiative and drive. High power individuals can meet those expectations because they are able to set agendas, norms for discussion, rules for behaviors, and opinion standards (Magee &

Galinsky, 2008). They also address team tasks and goals more directly (Galinsky et al., 2003), and thus ensure that members work efficiently. Therefore, high power individuals would choose to lead project teams dealing with tasks of low uncertainty, while team members would consent to their leadership.

In contrast, high status individuals may be unsuitable for leading teams handling tasks of low uncertainty. When clear solutions, action plans, and limited timelines are required, they may fail to contribute to team success or members' development. For example, a leader who cares too much about everyone's ideas and opinions (Blader & Chen, 2012) or personal development, and spends time helping (Cheng, Tracy, Henrich, 2010; Willer, 2009) may prevent the team from progressing toward its ultimate goals. Therefore, high status individuals may be less suitable for teams dealing with low uncertainty.

*H4: Individuals with informal power are more likely to be leaders of project teams performing tasks of low uncertainty than individuals with informal status.*

## **STUDY 1 - LEADERSHIP EMERGENCE IN CONSULTING PROJECT TEAMS**

### **Sample and Study Design**

To examine the effects of status and power on leadership emergence in project teams and the effect of team task types on status/power-leadership emergence relationships, I collected data from a company that uses self-managing teams as its primary working unit. The organization provides unique business consulting services to its sister

companies, some of which are Global Fortune 500 Companies. At the time of data collection, the organization employed 101 consultants and 20 administrative support staff. In the final sample, I excluded administrative staff not working on consulting teams.

The company has an unconventional procedure for forming project teams. Employees are allowed to freely and voluntarily initiate and join teams, so that project teams are formed naturally. The top management team advises project initiators regarding project duration and team size, but not on team members to be recruited. Any employee can initiate a project and become a project team leader. Consultants typically communicate with key people in the client companies to discuss goals for the consulting projects. For example, the company's HR consultants meet regularly with HR executives and managers in the sister companies and discuss current HR issues in the field. They meet with the top management team to decide how many team members are needed and how long the project should take. The initiator then announces the project through the company intranet six weeks before the project team is launched, so team members are recruited via web-board, online messenger, phone, or in-person meetings. All consultants can apply to any team openings. If they are offered the job, they can choose whether to join the team. Initiators can also accept or reject candidates. Once the team is assembled, the initiator officially registers the project in the administrative office and receives financial and other resources for the project. If the initiator fails to gather enough team members, the project is withdrawn. Each consulting project recorded in the company's HR system is considered to be a complete project. Each employee works for one project team at a time; participating in multiple projects simultaneously is not allowed.



I must clarify two issues that can cause concerns with the study design. First, creativity is not the main factor in initiating a project. Consultants already have a sense of the types of consulting projects they need to work on. All consultants communicate with potential clients in the sister companies. At the end of each year, the top management team gathers suggestions from company employees and from key informants and potential clients in the sister companies. The suggestions provide a list of consulting needs and themes to be the focus of the projects in the following year. Second, team member availability is no issue. Potential projects are announced six weeks before they begin. The average project term is two months, so consultants can think about their next project. Although it rarely happens, consultants can transfer teams if the current and future team leaders and top management team agree that a newly initiated team is a better fit for the employee. All consultants understand that team members may transfer teams according to the company's consulting priority.

The teams may be organized in a unique way, but otherwise they have the same characteristics as typical consulting teams. Project teams have time limits, produce one-time outputs, and involve considerable application of knowledge, judgment, and expertise (Cohen & Bailey, 1997). The context is ideal for observing how social hierarchy affects leadership emergence. In contrast to traditional team formation procedures by which higher authorities assign the teams, the employees in this organization can freely initiate and join project teams. Consequently, I can use the context to explore leadership emergence.

I first obtained HR archival data to gather employees' demographic information. Then I conducted an online survey with questions asking about their individual dispositions

and ties with other consultants in three types of social networks: communication, respect, and advice. To ensure a high survey response rate, I asked the administrative staff to announce the study. I then sent multiple reminder emails and provided a \$30 gift card to each participant who completed an online survey. Two years after the online survey, I collected data about project team history to get a sufficient sample size before too many formal hierarchical changes had occurred, for example, by promotion. During the 2-year window, 319 consulting project teams were formed, and each employee participated in an average of 9.21 projects (minimum 1, maximum 19). The average team size was 3.5 members (minimum 1, maximum 8), and the average project took 9 weeks (minimum 1, maximum 26). After I obtained data about the projects, I asked two senior managers to rate task uncertainty for each of the 319 projects.

## **Measures**

### **Independent Variables**

*Informal power.* Informal power was measured with betweenness centrality in communication network by asking employees to identify their communication relationships with their colleagues. I provided an alphabetized list of all employees and asked: "Please check the names of people in this organization with whom you communicate for job-related or firm-related information." This measure of power has been frequently used in earlier studies (Krackhardt & Brass, 1994). For example, the measure was used to study the relationships between structural positions and influence and to find different uses of power by men and women (Brass, 1984). Using this measure, power was viewed as structural position to observe behavioral tactics (Brass &

Burkhardt, 1993). The measure was also used to examine the effects of technology change on social network structure and power (Burkhardt & Brass, 1990).

Network research explains that two actors share a tie if one or both participants check the other's name(s) (e.g., Mehra, Kilduff, & Brass, 2001). Social networks studies frequently use betweenness centrality to represent where an actor stands between other actors in the network. Interaction between two nonadjacent persons might depend on other persons in a set, especially those lying on the path between the two (Wasserman & Faust, 1994). These "other persons" potentially have control over interactions between the two nonadjacent persons. Therefore, central persons lie between other persons on their geodesics (the shortest path between two nodes), implying that the person must be between many of the persons via their geodesics to have a high betweenness centrality. The measure is the most frequently used, well-established measure of power because it captures the nature of resource control (Bonacich, 1987). The betweenness index for  $n_i$  (node indicating person  $i$ ) is the sum of the estimated probabilities over all pairs of persons not including the  $i$ th person:

$$C_B(n_i) = \sum g_{jk}(n_i) / g_{jk}$$

where  $g_{jk}$  is the number of geodesics from node  $j$  to node  $k$ , and  $g_{jk}(n_i)$  is the number of paths that pass through  $n_i$ . So, this index, which counts the "betweenness" for each person, is a sum of probabilities. It has a minimum of zero, attained when  $n_i$  falls on no geodesics. The index reaches the maximum when the  $i$ th person falls on all geodesics. The value attained by the index depends on  $g$ ; thus, comparisons of values across networks of different sizes are difficult. Following Wasserman and Faust (1994), I

standardized it as:  $C'_B(n_i) = C_B(n_i)/[(N-1)(N-2)/2]$ , where  $N$  is the number of nodes in the entire network. Standardized in this way, it takes on values between 0 and 1, and can easily be compared to the other person's indices across networks and relations.

\* Alternative Measure of Power

I focused on the communication network because: (1) individuals at the research site are regarded as being on the same hierarchical level, where anyone can lead a project team. To reiterate, communication networks are more suitable for capturing relationships among people on the same level; and (2) communication network ties convey a broader range of valued resources than do advice network ties. The research site is a consulting company. The most valuable resources deal with information about the industry, clients, market, sister companies, the parent company, and consulting knowledge.

However, centrality in advice networks may be an alternative measure of informal social power. For example, advice network centrality was used in an investigation of how power in social roles is associated with victimization in dyadic relationships (Aquino & Lamertz, 2004). Another study explored the effects of power on job and work-unit attachment (Zagenczyk & Murrell, 2009).

Thus, for a supplemental analysis in Study 1, I used betweenness centrality in the advice network, which provides some advantages. Advice is the "valued resource" in an advice network. Obviously, advice, which indicates specific information exchanged between actors, is a clearer benefit than general information obtained through a communication network. Another advantage of advice network centrality over communication network centrality is that it captures the essence of "dependence" in the

definition of power. Usually, lower power individuals lack resources and must depend on more powerful individuals who have more resources. One of my survey requests was: “Please check the names of people in this organization who provide you critical advice or help about complex problems posed by your work.”

*Informal status.* Informal status was measured with in-degree centrality in respect network by asking "Please check the names of people in this organization whom you respect, admire or look up to." Respect network measures sentiment relations (Knoke & Kuklinski, 1982; Wasserman & Faust, 1994). Calculating individual prestige in respect networks requires directional relation assumptions. Using data with directional relations, researchers can distinguish between choices made “out-degree” and choices received “in-degree.” The simplest individual-level measure of prestige is the in-degree of each individual. The idea is that prestigious individuals tend to receive many nominations or choices. Following Wasserman and Faust (1994), I calculated in-degree centrality as the number of direct contacts an actor had in a network:

$$C_D(n_i) = d_I(n_i)$$

where  $d_I(n_i)$  is the number of actors in the same network (size of  $N$ ) who identify actor  $i$  as a person respected, admired, or looked up to. Again, standardized in-degree centrality was calculated by dividing  $C_D(n_i)$  by  $N$  (Wasserman & Faust, 1994), so that the in-degree centrality values were comparable across networks and relations. Maximum centrality occurs when  $P'_D(n_i) = 1$ ; that is, when all other individuals choose individual  $i$ . At a minimum, the index attains the value of 0 in its limit, which appears when no one chooses the person.

#### \* Validity of Informal Status Measure

Unlike the empirically well-established measure of informal social power (e.g., Krackhardt & Brass, 1994), I must examine the validity of informal social status. Although typical multi-item scales have robust ways to develop and test validity, validating social network measures is difficult because the social network measure is typically a single item. My sample included 101 consultants. If I asked multiple questions about power and status of the other 100 consultants, participants would have been fatigued and would have given incorrect responses.

Therefore, I conducted a separate study using Amazon Mechanical Turk (mTturk) to check whether a single item network survey works as well as a multi-item scale. I asked participants to recall their previous leader and answer a single-item question: “Ranging from 1 = *strongly disagree* to 5 = *strongly agree*, indicate your reaction to the statement: I respect, admire, or look up to my leader.” A five-item respect scale (Tyler & Blader, 2002) and a three-item admiration scale (Conger, Kanungo, & Menon, 2000) were also included in the survey. Appendix 1 shows the result. The correlation between the five respect items and the “informal status” single items was .75. The correlation between the three admiration items and the “informal status” single items was .80. The conducted confirmatory factor analysis (CFA) results showed that the single item measure loaded appropriately with the five respect and three admiration multi-item scales ( $\chi^2(27) = 189.62, p < 0.05$ ). Therefore, a single network item was appropriate for measuring informal status. Another concern about this measure would be whether the type of network and type of centrality cause the distinction between the power measure

and the status measure. Betweenness centrality in communication network had a .40 correlation with in-degree centrality in the respect network. Thus, the two centralities indicate that the individuals hold different structural positions.

### **Dependent Variables**

*Leadership emergence.* Leadership emergence has been defined as “a process that an individual is designated to be in the leadership positions of teams by the people in the organization” (Neubert & Taggar, 2004). Based on that definition, I operationalized “leadership emergence” as “likelihood of becoming a project team leader” because the research site used self-organizing as a method for forming consulting project teams and selecting leaders. Each employee must work in project teams, as leaders or as members. Previous studies have also used a proportion measure of leadership emergence (e.g., Neubert & Taggar, 2004). Therefore, using proportion as a likelihood of leadership emergence is appropriate in this setting. Study participants participated in multiple consulting projects during the 2-year window. Two years after the network survey, I obtained project team data from the company’s HR and project database. I counted how many projects each employee had worked on and how many leadership positions they had taken. Finally, I measured the project team leadership emergence for each employee by the formula:

*(The likelihood of) leadership emergence* = the number of leadership positions taken / the total number of projects.

*Task uncertainty.* Two senior managers at the research site rated the task uncertainty of 319 projects following my instructions: “Task uncertainty is defined as a lack of

predictability associated with inputs, processes, and outputs of the broader technical system within which the work is performed. Please rate task uncertainty of each project from 1 = *Very low* to 5 = *Very high*.” I calculated Cohen's kappa to check for agreement regarding uncertainty inherent in each consulting project. Agreement was  $\kappa = .91, p < .001$ . Similarly, Krippendorff's alpha for uncertainty was .91, also indicating significant agreement. In this study, individuals were not nested in teams/projects, but they have joined multiple teams/projects during the data collection period. Task uncertainty is measured by project, but the unit of analysis in the models is individual. Therefore, I calculated the average score of uncertainty ratings of the projects that each participant led. For supplemental analysis, I also measured alternative team task types, risk and open (vs. closed) tasks. The results showed agreement between the two managers' judgments for the alternatives (Cohen's kappa = .85 and .90; Krippendorff's alpha = .85 and .90 for risk and open (vs. closed), respectively).

### **Control Variables**

*Formal hierarchy* is related to informal social hierarchy and leadership emergence. I measured formal hierarchy using the company's organizational ranking system. From highest to lowest position titles, I coded the formal hierarchy by assigning 5 = research fellow, 4 = senior researcher, 3 = researcher, 2 = junior researcher, and 1 = research trainee. Age, gender, and race are examples of diffuse status characteristics that may affect leadership emergence. For example, men are generally viewed to have higher status than women (Eagly & Wood, 1982). Therefore, I controlled for *age* and *gender*. Personality (e.g., extraversion) has also been related to leadership (Judge, Bono, Ilies, & Gerhardt,



2002), so I included the big 5 personality traits in the model. In addition, experience in the company may affect leadership emergence, so I controlled for *organizational tenure* and *working experience* (e.g., *number of projects*). I found high correlations among age, organizational tenure, and organizational rank (.84 between age and organizational rank; .85 between age and organizational tenure; and .80 between organizational rank and organizational tenure), so I included only organizational rank in the final models.

## **Results and Discussion**

Table 4 shows the descriptive statistics, reliability coefficients, and correlations. The correlation between status and power is .40, which shows that status and power are related yet distinct. Hypothesis 1 predicted that individuals with high informal status are more likely to be leaders of project teams, and Hypothesis 2 predicted that individuals with high informal power are more likely to be leaders. Table 5 shows the results of regression analysis for the effects of power and status on leadership emergence. Model 1 included only the key independent variables and dependent variable. Different sets of control variables were added in Models 2, 3, 4, 5, and 6. The results showed that informal status was positively related to leadership emergence ( $\beta = 2.02, p < .01$ ). The positive effect of status on leadership emergence was consistent in all models when demographic information, personality traits, formal social hierarchy, and project-related control variables were added. Power had a positive and significant effect on leadership emergence in Models 2, 3, and 4 ( $\beta = 5.61, p < .01$ ;  $\beta = 5.68, p < .01$ ;  $\beta = 5.56, p < .01$ , respectively), but the effect disappeared when big 5 personality traits were included in the

models ( $\beta = 3.90, p > .05$ ;  $\beta = 3.89, p > .05$ ). Therefore, Hypothesis 1 was supported but not Hypothesis 2.

Hypothesis 3 predicted that individuals with high informal status are more likely to lead project teams dealing with tasks of high uncertainty. Hypothesis 4 predicted that individuals with high informal power are more likely to lead project teams facing tasks of low uncertainty. Table 6 shows the results of regression analysis for the effects of power and status on leadership emergence by project uncertainty score. In Model 6, informal status was positively related to leadership emergence ( $\beta = 5.66, p < .05$ ). Power had no significant effect on leadership emergence in any models. Therefore, Hypothesis 3 was supported but not Hypothesis 4.

*Supplemental analysis.* As discussed in the measures section, I used an alternative measure of power. That is, I measured betweenness centrality in the advice network rather than in the communication network. Appendix 2 shows the supplemental analysis results for Hypotheses 1 and 2 using this alternative independent variable. As Hypothesis 1 predicted, status was still positively related to leadership emergence ( $\beta = 2.26, p < .01$ ) when an alternative measure of power was included. Hypothesis 2 was not supported when an alternative measure of power was included in the model ( $\beta = 0.73, p > .05$ ). Appendix 3 shows the results of the supplemental analysis for Hypotheses 3 and 4 using the alternative independent variable. Again, the same results were found. Although status had a positive and significant effect on leadership emergence in high uncertainty projects ( $\beta = 5.39, p < .05$ ), power had a nonsignificant effect on leadership emergence in low uncertainty projects ( $\beta = 3.65, p > .05$ ).

In another supplemental analysis in testing Hypotheses 3 and 4, I used alternative dependent variables: the number of leadership positions in high(low) uncertainty projects divided by the number of high(low) uncertainty projects involved. Appendix 4 shows the same results using alternative dependent variables: Status had a significant positive effect on leadership emergence under high uncertainty projects ( $\beta = 2.60, p < .01$ ). Power had a positive and significant effect on leadership emergence under low uncertainty projects in some models, but the effect disappeared when the big 5 personality traits were entered into the models. Again, the supplemental analysis supported Hypothesis 3 but not Hypothesis 4.

The results from Study 1 support my prediction that the individuals most likely to emerge as leaders of project teams during team formation stages are those who have informal status in the social hierarchy of organizations. Furthermore, the type of team tasks may determine the impacts of status and power on leadership emergence. That is, status but not power affects leadership emergence in teams dealing with highly uncertain tasks.

### **SOCIAL HEIRARCHY, LEADERSHIP, AND CONFLICT**

In Study 1, I show that high status individuals are more likely to be leaders of self-managing project teams than low status individuals. I also show that the type of team project plays a role in attracting either high status or high power potential leaders. Individuals with high informal status are more likely to be the leaders of project teams performing tasks of high uncertainty. The assumption in Study 1 is based on previous

studies showing that social power and social status have different effects on behaviors (e.g., Blader & Chen, 2012; Hays & Bendersky, 2015). Specifically, potential leaders who have power tend to focus on tasks, while potential leaders who have status tend to focus on relationships. However, in Study 1, leadership emerges at the beginning stage of team formation, so the dependent variable is an aggregation of multiple team project experiences. Thus, I was not able to test this assumption in Study 1. In Study 2, I look closely into the underlying mechanisms affecting how power and status differently affect leadership behaviors, and how the leadership behaviors persuade team members to grant leadership in self-managing teams.

Although status and power are associated with leadership emergence in teams, they may also cause conflict by activating threat and distrust (Greer, 2014) when team members perceive that leadership is misaligned with social hierarchies. The misalignment can be complex because social hierarchy has multiple forms, such as status and power, and multiple levels, such as team and organizational levels. Therefore, I will also investigate how the inconsistency between status and power and between organizational and team status/power affect process and conflict.

### **Social Hierarchy, Leadership Behaviors, and Leadership Emergence**

I argue that status and power lead individuals to show different leadership behaviors. In addition, I argue that leadership behaviors generate leadership emergence. To examine the relationships, in Study 2, I will observe how leadership emerges in self-managing teams. In Study 2, I define leadership emergence as a phenomenon whereby leadership is distributed among team members. Table 1 in the previous section provides a

summary showing that I use definitions coinciding with definitions found in other research observing teams that have informal and multiple leadership. The studies closest to mine in terms of definition and measures are Zhang et al. (2012) and Wang et al. (2014).

To focus more on how status and power may manifest as different team leadership behaviors, I adopt the taxonomy of leadership behaviors by Yukl, Gordon, and Taber (2002). Their framework is useful because they grouped twelve frequently studied leadership behaviors into three proposed meta-categories in terms of their primary objective: 1) *task*-focused, which is interchangeable with *transactional* or *directive* leadership (Bass, 1990; Bass, Valenzi, Farrow, & Solomon, 1975), 2) *relations*-focused, which is interchangeable with *participative* (Bass, 1990; Bass et al., 1975) or *social* leadership (Eagly & Karau, 1991), and 3) *change*-focused, which is interchangeable with *transformational* leadership (Bass, 1985; House, 1977).

It is important to clarify the distinction between task-focused and relations-focused leadership behaviors. Early leadership research typically focused on designated leaders (e.g., Yukl, Gordon, & Taber, 2002) and established task- versus relations-oriented categories. Hiller, Day, and Vance (2006) studied emergent leadership in teams and further defined task and relation-focused leadership: (1) Task-focused leadership behaviors focus on facilitating team planning and organizing and aiding team problem solving, and (2) Relations-focused leadership behaviors focus on providing support and consideration and fostering development and mentoring.

### **Status and Relations-focused Leadership Behavior**

Individuals are more likely to maintain or increase their status by showing relations-focused leadership. Individuals who exhibit outward orientations focused on relationships with others tend to be recognized as having status (Blader & Chen, 2012; Galinsky, Magee, Gruenfeld, Whitson, & Liljenquist, 2008). They are generally seen as being warm (Cuddy, Fiske, & Glick, 2008), helping (Cheng, Tracy, Henrich, 2010; Willer, 2009) considerate, sympathetic, supportive, and encouraging toward upset and anxious cohorts who are or encountering difficulty. Team members tend to admire, respect, and associate with high status individuals, but not when high status individuals fail to reciprocate with sufficient attention (Gould, 2002).

High status individuals are highly influential (Berger, Rosenholtz, & Zelditch, 1980; Ridgeway & Correll, 2006) because their power to influence is essential for advising others about how to perform better or develop their skills. Therefore, high-status individuals can encourage participation in team activities and accept others' ideas and suggestions. Another benefit is that high status individuals have greater visibility (Frank & Cook 1995, Goode 1978, Gould 2002). They tend to attract notice, and thus have more communication opportunities (Shrum & Wuthnow 1988). Therefore, they are better positioned to praise and recognize team members for their contributions and achievements. Team members will draw greater rewards from being recognized by someone in a high rather than low status position.

However, the outward people-focused orientations may be inadequate for task behaviors requiring task or goal orientations (Blader & Chen, 2012; Galinsky et al., 2008). Consequently, high status individuals who care more about relationships with

others than team tasks, may find it difficult to quickly diagnose problems and find solutions, and thus may not focus on team planning and organizing. They may listen too much to others' ideas and opinions, or be too concerned about personal growth or private matters, so that they cannot efficiently determine the best and most timely action plans to reach team goals. In sum, high-status individuals are likely to perform supporting, consulting, developing, and recognizing leadership rather than task-focused leadership:

*H5. Individuals with high informal status are more likely to perform relations-focused leadership behaviors than individuals with low informal status.*

### **Power and Task-focused Leadership Behavior**

In contrast, individuals with high power are better able to set agendas, norms for discussions, rules for behavior, and standards for thoughts and opinions (Magee & Galinsky, 2008). They are in a better position to assign tasks, explain job responsibilities, and clarify task objectives. They tend to take more goal-directed actions (Galinsky et al., 2003) and to present their plans and outcomes with great enthusiasm and conviction.

They tend to be more action-oriented (Anderson & Galinsky, 2006; Brinol et al., 2007) and therefore more likely to set goals and decide how teams should proceed. They tend to openly express their opinions in group discussions (Anderson & Berdahl, 2002; Berdahl & Martorana, 2006), to monitor the progress and quality of work, and to evaluate team performance.

The tendency to focus on tasks rather than people will cause high power leaders to be less likely to show relationship behaviors that require caring qualities. They are

typically self-centered and thus have reduced awareness of others (Van Kleef et al., 2006). They find it difficult to approach team cohorts and thus become psychologically distant (Kipnis, 1972). In addition, they tend to express their attitudes and emotions straightforwardly (Brinol et al., 2007) while discounting the opinions and perspectives of others (Galinsky et al., 2006). When subordinates need help with difficult tasks or fail to perform, high powered individuals tend to blame or derogate rather than mentor subordinates (Overbeck & Park, 2001). In sum, high powered individuals are more likely to focus on task-focused rather than relationship-focused leadership behaviors:

*H6. Individuals with high informal power are more likely to perform task-focused leadership behaviors than individuals with low informal power.*

Leadership emergence has been conceptualized as a team-level collective concept and has been measured according to ratings from other team members (e.g., Carson et al., 2007; Wang et al., 2014; Zhang et al., 2012). Leadership behaviors are also understood at the team rather than the member level where leaders set team goals, decide how teams should proceed, organize plans, and foster cohesive team atmospheres (Hiller et al., 2006). Hypotheses 5 and 6 consider general team leadership behaviors. However, sometimes leaders give support and instruction to specific team members rather than to teams as a whole (Hiller et al., 2006). It is for this reason that I look more closely at the relationship between power/status and leadership behavior at the dyadic level. For example, I examine the impact of asymmetric power or status between two individuals and compare the effect of mismatched relative power or status rankings. Another reason



why I investigate those relationships at the dyadic level is that I explore possible effects of leaders' and followers' personality traits on leadership behaviors.

### **Confidence and Expectations as Mediating Status/Power–Leadership Behavior Relationships**

In order to investigate how different forms of social hierarchy lead different types of leadership behaviors, I need to closely look into status and relations-focused leadership behaviors relationship and power and task-focused leadership behaviors. This can be done by looking for mediating mechanism. The self-reinforcing theory of social hierarchy (Magee & Galinsky, 2008) explains the mechanisms that high power (status) people use to maintain their power (status). I suggest two mediation mechanisms: (1) high status leaders adhere to followers' expectations regarding relations-focused behaviors and (2) powerful leaders instill self-confidence in task-focused behaviors.

Expectation is a possible mediation mechanism in relation-focused behaviors. Perceptions establish status (Magee & Galinsky, 2008), and status hierarchies exert situational pressures on behavior (Guinote, Judd, Brauer, 2002; Jetten, Hornsey, & Adarves-Yorno, 2006). That is, status rankings cause expectations about role behaviors, and the expectations have direct and indirect effects on behaviors. In other words, observers form expectations (Magee & Galinsky, 2008) that high status individuals should be helping and cooperative (Cheng, Tracy, Henrich, 2010; Willer, 2009), consider others' needs (Blader et al., 2013; Galinsky et al., 2006), and consider others' perspectives and opinions (Blader & Chen, 2012). As H1 proposes, hierarchy guides social interactions; behavior must be consistent with social hierarchy expectations (Flynn

et al., 2006; Magee & Galinsky, 2008). People often treat high status individuals in ways that are consistent with their expectations; in turn, high status individuals act in ways that fulfill the expectations (Magee & Galinsky, 2008). In contrast, when individuals act inconsistently or inappropriately according to expectations, they are often negatively evaluated and socially rejected (Anderson, Ames, & Gosling, 2008; Magee & Galinsky, 2008), and lose their status. In sum, status drives interpersonal processes: expectations can constrain high status individuals so that they are more likely to show relations-focused behaviors.

*H7: Team members' expectations will mediate the relationship between status and relations-focused leadership behavior.*

Self-confidence is a possible mediation mechanism between power and task-focused behaviors. Powerful individuals have control of resources (Magee & Galinsky, 2008), suggesting that power resides in that individual. Unlike others' expectation for status, individual's own perception of one's power can be more important mediator. High power individuals are confidence (Anderson & Galinsky, 2006; Magee & Galinsky, 2008), which then motivates goal- and action-orientation (Galinsky et al., 2003), with consequent success (Steele & Aronson, 1995; Taylor & Brown, 1988). In sum, high power individuals tend to have self-confidence which then causes them to focus on behaviors that are instrumental for team goals (Magee & Galinsky, 2008). Therefore, power leads to actor's self-confidence, and in turn, this confidence drives individuals to perform task-focused leadership behaviors.

*H8: Self-confidence will mediate the relationship between power and task-focused leadership behavior.*

### **Leadership Behaviors and Leadership Emergence**

Next question is whether these leadership behaviors are related to granting leadership by team members. Mann (1959) explains three ways how leaders emerge by (1) making contributions that satisfy others' needs, the focus of relational leadership; (2) fulfilling roles necessary for successful group functioning, the focus of task leadership; or (3) exhibiting qualities associated with socially defined leadership expectations (Mann, 1959). I argue that aspiring leaders must meet one or more of those leadership behaviors if team members are to grant them the right to leadership.

Leadership is likely to be granted to aspiring leaders who support team members because support is considered a role of leadership (Hamblin, 1958). As discussed, team members would expect high status individuals to provide coaching, advice, and opportunities for skill development; to encourage participation in decision making; to use others' ideas and suggestions; to show interest in team members' personal well-being (Julian & Hollander, 1966); to be considerate, to show sympathy and support when cohorts are upset or anxious, to provide encouragement and support when tasks are difficult and stressful, and to provide praise and recognition for effective performance or significant achievements (Hiller et al., 2006). In sum, individuals who occupy central support roles must satisfy the needs of team members (Forsyth, 1990) and show relations-focused behaviors if they are to fulfill team members' expectations and consequently be granted leadership (Mann, 1959). Therefore, I hypothesize:

*H9: Team members are likely to grant leadership to individuals who perform relations-focused leadership behaviors.*

Emergent leadership is associated with the practice of giving task-related advice (Sorrentino & Field, 1986). Indeed, studies showed that individuals who provide advice are clearly the ones most likely to emerge as leaders (e.g. Carter, Haythorn, Shriver, & Lanzetta, 1951). High power leaders typically assign tasks; explain job responsibilities, task objectives, and performance expectations; monitor work progress and quality; evaluate individual and unit performance, determine how to use personnel and resources and how to schedule and coordinate unit activities most efficiently (Hiller et al., 2006). Team members would find that the qualities associated with power identify potential team leaders. Therefore, I predict:

*H10: Team members are likely to grant leadership to individuals who perform task-focused leadership behaviors.*

### **Consistency as Moderating the Status/Power–Leadership Emergence Relationships**

I have based my argument on the assumption that individuals know the extent of their status and power, and that cohorts agree about status and power levels. Indeed, group members have been shown to share high consensus about where they and others stand in the social hierarchy (Schmid Mast, & Hail, 2004). Individuals form inferences and judge others' competence and influence even from short interactions or observations (Magee & Galinsky, 2008; Todorov, Mandisodza, Goren, & Hall, 2005). They also tend to have a high degree of consensus about ranks in social status (Anderson, Srivastava, Beer, Spataro, & Chatman, 2006; Magee & Galinsky, 2008).

To check the assumption that individuals in a team have a high degree of consensus about individuals' ranks in social status and power, I will examine whether consistent perceptions moderate the relationship between status/power and leadership emergence. I argue that consistency/inconsistency regarding power/status perceived by others and self-evaluated power/status can affect the leadership emergence process. When team members and an aspirant have consistent perceptions about power and status, team members have firm grounds for justifying aspirant's leadership behaviors (Magee & Galinsky, 2008) and are more likely to grant leadership to aspirants (DeRue & Ashford, 2010). In contrast, when perceptions are inconsistent, or when individuals seem to violate social role expectations, team members will be less accepting (Anderson et al., 2008). Therefore, I expect:

*H11: Consistency between team members' aggregated perceptions of and aspirant's perceptions of aspirant's status will strengthen the relationship between status and leadership emergence.*

*H12: Consistency between team members' aggregated perceptions of and aspirant's perceptions of aspirant's power will strengthen the relationship between power and leadership emergence.*

### **Hierarchy Inconsistency and Conflict between Team Members**

In the current study, the effect of status/power on conflict, in conjunction with leadership, is examined for three reasons. First, leadership and conflict both strongly impact individual and team outcomes (e.g., de Wit, Greer, & Jehn, 2012; Wang, Oh,

Courtright, & Colbert, 2011). Second, both leadership and conflict strongly impact one another. For example, abusive leadership causes conflict among subordinates (e.g., Tepper, 2000), while conflict can inhibit leadership effectiveness (e.g., Katz, 1977). Third, and most important, the leadership emergence process can cause conflict among team members, the focus of my research at this point. As explained in the previous chapter, team members go through claiming and granting leadership. Typically, not all leadership claims can be granted by others, and denying or not granting can be a source of conflict in teams. Status and power both have positive functions of motivating individuals, but social hierarchies can be critical sources of perceived inequalities and conflicts, and thus conflict may arise in self-managing teams (Muller, 1985). A typology study of three types of diversity indicated that status and power are associated with group competition (Harrison & Klein, 2007). Recall that individuals try to achieve higher levels of status and power to gain the material and psychological rewards enjoyed by those who occupy higher social ranks (Tannenbaum, Kavcic, Rosner, Vianello, & Wieser, 1974). Competing motivations to achieve status and power may create conflict among team members as they go through claiming and granting processes (DeRue & Ashford, 2010). Ultimately, team members may refuse to grant leadership and conflict may rise.

I argue that members might refuse to grant leadership because they perceive that aspirants act in ways that are inappropriate and unaligned with expectations regarding their power or status. If team members perceive that an aspirant's claim is legitimate and well-aligned with the expected behaviors according to the aspirant's power/status rank, they will grant the leadership claim. In contrast, if members perceive that the claim is

illegitimate and unaligned with expectations based on the aspirant's power/status rank, team members will refuse the claim. Instead, they will feel conflict as they perceive that the aspirant's claim threatens their own desires to achieve higher power/status. Therefore, in an answer to calls for more studies of conflict from a structural perspective (e.g., Mannix & Sauer, 2006), I will examine how perceptions of hierarchical inconsistency cause team conflict.

I have assumed so far that only one hierarchical form is in play at any given time. The predominant approaches to studying status and power involve investigating their effects separately or treating them as a single variable (Bunderson & Reagans, 2011). The possibility that status and power are two distinct variables acting separately or even interacting to shape social interactions has not been widely considered (Blader & Chen, 2012). However, people can be valued according to multiple dimensions (Magee & Galinsky, 2008), and hierarchical ranks across the dimensions may be inconsistent in organizations. To explain the impact of misfits among hierarchies, we must consider possible "status inconsistency"; that is, individuals often have high social hierarchical ranking on one valued dimension but low social hierarchical ranking on another dimension (Stryker & Macke, 1978; Weber, 1946).

Status inconsistency theory (Weber, 1946) predicts that people who have inconsistent multiple forms/levels of social hierarchy will be frustrated and dissatisfied because their higher rank is salient to themselves but not to others (Lenski, 1954). Cognitive dissonance theory (Festinger, 1957) explains that individuals tend to seek consistency among their cognitions (i.e., beliefs, opinions) and try to eliminate the

dissonance caused by inconsistencies. Therefore, they try to balance multiple social hierarchies by increasing the lower form(s) of hierarchy to be equal to the higher form(s) (Segal & Knoke, 1968). For example, one study showed that job applicants chose to join local low-status firms where they expected to more easily obtain promotions (Phillips, 2001). That is, they could rise in the hierarchy by choosing opportunities in a lower-ranked area. An executive who has high power in controlling budgetary resources but low status in being disrespected by subordinates might try to assuage the dissatisfaction caused by hierarchical inconsistency by trying to increase status, such as by spending more time with subordinates. Similarly, a research fellow who has high status in being respected by colleagues but low power in being unable to set project budgets will be frustrated with the inconsistency and will try to increase power by submitting research fund proposals.

Hierarchy inconsistency may cause interpersonal conflict in self-managing teams where, in the absence of formal leaders, members tend to compete for informal leadership (DeRue & Ashford, 2010), motivated by their desires to acquire the rewards accorded to leaders (Day et al., 2009). Recall that leadership positions bring instrumental rewards such as promotions, interpersonal rewards such as recognition or admiration, or image-based rewards such as positive reputations (DeRue & Ashford, 2010). Those who have had high status and power in previous positions are motivated to maintain their status and power in new situations (Magee & Galinsky, 2008; Maner et al., 2007) because the positions become a part of the holder's identity (DeRue & Ashford, 2010), and are essential for maintaining a positive self-image (Greer, 2014). Team members in



competitive environments feel threats to their social positions when other members challenge their identity or roles (Greer, 2014; Tetlock, 2002) by acting in ways that might bring power and status in team activities (De Cremer & van Dijk, 2005). In other words, inconsistent status and power social hierarchies—when the aspirant’s status and power are misaligned with members’ perceptions of the aspirant’s status and power—can cause team members to hold conflicting expectations about behaviors (Bacharach, Bamberger, & Mundell, 1993; Magee & Galinsky, 2008) and activate feelings of threat and distrust (Greer, 2014). For example, team members will reject the behaviors of lower ranked members who try to act in ways expected for higher ranked individuals (Anderson et al., 2008; Rudman, 1998). Members will then try to rectify the inconsistency by competing for positions. Conflict arises as one member tries to occupy the space of another. Eventually, members experience conflict with the aspirant who is acting inconsistently with expectations based on power and status rankings (Magee & Galinsky, 2008).

To achieve a more consistent instrumental versus expressive discussion (e.g., task- and relations-focused leadership behaviors), I focus on process and relationship conflicts, as proposed by Jehn and Mannix (2001). Team relationship conflict occurs when team members have interpersonal differences or personality clashes resulting in dislike, annoyance, frustration, and irritation among members (Jehn, 1995; Jehn & Mannix, 2001) and causing tension, friction (Amason, 1996; Pinkley, 1990), interpersonal animosity, and annoyance (Jehn, 1995, 1997). Process conflict occurs when team members disagree about how tasks should proceed (Jehn & Bendersky, 2003) and how to most effectively organize and utilize group resources to accomplish tasks (Behfar

et al., 2010). Thus, process conflict is likely when teams lack clear action plans for goals, resource allocations, or timelines for task completion.

Although process conflict is theoretically distinct from task or relationship conflict, the two types of conflict have not been empirically differentiated (Mannix, Griffith, & Neale, 2002) although both have been highly correlated with relationship conflict (Behfar, Mannix, Peterson, & Trochim, 2010; Korsgaard et al., 2008). Thus, I examine process conflict more closely to determine how it relates to task and relationship conflict. Behfar et al. (2010) showed that process conflict includes both logistical and contribution aspects. They generated seven clusters of conflict types and matched four clusters with task, relationship, and process typology from Jehn et al. (2008). However, they encountered difficulty in the remaining three clusters in trying to distinguish process conflict from task or relationship conflict. Specifically, the cluster of “different approach in methodology and solving issues” and the cluster of “difference of ideas and difference in opinions” (Behfar et al., 2010, pp.11, 12) are in the grey areas between process and task conflict. Regarding distinction between process conflict and relationship conflict, the cluster of “quality of workload distribution/equality of effort” and the cluster of “lack of communication in a respectful or effective manner” (pp. 10, 11) do not show meaningful differences.

Both process and relationship conflict are problematic. Both are negatively related to team outcomes (e.g., performance, satisfaction, trust, cohesion, commitment, identification, innovation, potency, and organizational citizenship behavior) and individual outcomes (e.g., performance and interpersonal trust) (e.g. de Wit, Greer, &

Jehn, 2012; Jehn, Greer, Levine, & Szulanski, 2008; O'Neill, Allen & Hastings, 2013; Shah, Park, & Jones, working paper). In the short run, relationship conflict should be more problematic because it is associated with ego-threatening behaviors. In the long term, all conflict types can damage individuals and teams because conflict escalates if it is inadequately managed. In fact, any type of conflict triggers other types of conflict (e.g., Simons & Peterson, 2000).

Before detailing the hierarchy inconsistency–conflict relationships, I must clarify the unit of analysis. I diverge from my treatment of leadership behavior or leadership emergence and treat conflict with team members from the dyadic level. Most previous studies have observed how within-team conflict affects team outcomes such as performance, cohesion, commitment, and innovation. In contrast, I explore how dyadic level conflict influences interpersonal trust among team members. I argue that team members may have conflicts with some members and not with others. Moreover, team members may respond differently to the same instigations and hierarchical inconsistencies depending on which member displays the actions. In other words, each team member may have different perceptions regarding illegitimate behaviors indicating power/status inconsistency. Some members may perceive serious threat from an expectation-behavior violation, while others may see the inappropriate behaviors as minor concerns. I argue that needs for power and status will determine sensitivity to expectation violations. Here, the unit of analysis is a dyad comprising the conflict instigator and the observer of the inappropriate behaviors. Using this dyadic lens allows

us to learn how motivations to achieve power/status moderate the relationship between hierarchy inconsistency and conflict.

### **Status-Power Inconsistency and Conflict**

One form of hierarchy inconsistency that may cause conflict in a dyad is mismatch between status and power dimensions of social hierarchy. Power begets status and status generates power, but the process takes time (Magee & Galinsky, 2008). Thus, sometimes individuals have a great deal of status (power) but little power (status), which leads to an inconsistency of power and status ranking. For example, a senior manager might have high power through control over financial resources but low status because of a lack interpersonal skills and respect.

Self-managing teams need order and coordination. Thus, team members are likely to vie for leadership, power, and status roles. While members are motivated to put effort and commitment into raising their power and status, they are also motivated to evaluate other team members' power and status. If they observe that team members are acting inconsistently with their status or power, doubt may arise (Greer, 2014). A key factor for evaluating a fellow member becomes the perceived legitimacy or the degree to which power and status seem to be fair and justified. Legitimacy facilitates cooperation, stabilizes the power structure, and decreases conflict and friction between team members (Halevy et al., 2011). However, each team member may have different standards for evaluating the legitimacy of social positions, which can then lead to inconsistencies regarding the granting of legitimacy.

### **High power–low status inconsistency and relationship conflict**

I argue that individuals who have high power but low status will provoke more relationship conflict with team members than will individuals who have any other combinations of status and power (high status–high power, low status–low power, or low status–high power). Power liberates its holders to pursue their own goals and interests (Galinsky et al. 2003), to express their true feelings and attitudes (Anderson & Berdahl, 2002; Magee & Galinsky, 2008), and to deal with others authentically (Kifer et al., 2013; Kraus et al., 2011). Powerful people tend to be action-oriented, especially when actions are goal-directed (Galinsky et al., 2003).

In contrast, low status individuals are less likely to be helpful and cooperative or to give advice (Cheng et al., 2010; Willer, 2009). Their focus is generally not on relationships or others' needs (Blader et al., 2013; Galinsky et al., 2006). Instead, high power–low status team members may facilitate actions, indicating high power, but fail to showing caring, indicating low status. If they then try to assume leadership, team members are unlikely to provide support (Anicich et al., 2015). Thus, the low status–high power combination is most likely to cause interpersonal relationship conflict including animosity, tension, or annoyance.

High power–low status individuals who focus on task-focused behaviors will be acting in alignment with their power. Despite the low status inconsistency, the high power is a salient, clearly observable quality persuading team members to evaluate leadership according to whether task-focused behaviors align with power rankings. If they do, team members would grant the claims to leadership, feel no need to compete, and be unlikely to have process conflict:

*H13. High power–low status individuals have more relationship conflict with team members than individuals who have any other combination of status and power (high status–high power, low status–low power, or low status–high power).*

### **High status – low power inconsistency in process conflict**

I also argue that high status–low power individuals will instigate more process conflict than will individuals with any other combination of status and power. Being more attentive to others' views and perspectives (Blader & Chen, 2012), high status individuals are better able to encourage participation in team discussions, which may become overly lively as members freely voice their ideas and opinions. High power individuals are usually best able to clearly set agendas, norms for discussion, rules for behavior, and standards for thought and opinion (Magee & Galinsky, 2008).

Unfortunately, unregulated team discussions without discussion agendas or norms may lead to meaningless arguments that inhibit team progress. Without the leadership often ascribed to power, teams will lack an authority to monitor work progress and quality or evaluate performance. Therefore, the high status–low power individual may be unable to regulate team discussions or arguments. Ideas and opinions are likely to float around discussions, and clear action plans are unlikely to surface. In sum, high status and low power interact to produce disagreements about assignments of duties and resources. Therefore, high status–low power individuals will instigate process conflict.

Although high status–low power individuals have inconsistent power and status, their relations-focused behaviors are clearly aligned with their status. When team

members evaluate relations-focused behaviors, they consider whether they align with the status hierarchy. If so, the behaviors are perceived to be appropriate and members will willingly grant the claims to relation-related leadership, without competition. Therefore, the high status individual will experience no power–status inconsistency relationship conflict with team members. Therefore, I hypothesize:

*H14. High status–low power individuals have more process conflict with team members than individuals with any other combination of status and power (high status–high power, low status–low power, or low status–high power).*

### **Global–Local Inconsistency and Conflict**

Until now, I have focused on the effects of global level social hierarchies, based on individual network positions within the whole organization. However, individuals can have multiple forms of hierarchy rankings on each value dimension throughout organizational levels. The inconsistencies among multiple hierarchies are complex because individuals are typically nested within multiple collectives and teams (Magee & Galinsky, 2008), and teams are nested within organizations. The complexity opens an opportunity to explore how relationships in one level interact with relationships in other levels. Even external relationships can affect group performance (e.g., Ancona & Caldwell, 1992; Shah, Dirks, & Chervany, 2006). However, only a few studies have looked at status and power in multiple levels. Both Frank (1985) and Phillips (2001) found that employees have distinct statuses at organizational and industry level that then affect their career choices.

Here, I focus on individuals who have unbalanced hierarchies at organizational (global) and team (local) levels. In other words, individuals can have multiple status (power) hierarchies in different levels. Employees who have high status (power) at the organizational level while having low status (power) at the team level will suffer as a result of inconsistencies between their global and local rankings. For example, a research fellow with firm-specific knowledge may be highly respected within the organization (high global status) but be disrespected by team members (low local status) for being an incompetent coach, triggering relationship conflict. People tend to justify their behaviors based on status or power in the level that conveys the greatest benefits. For example, when people make career choices, they actively consider whether to focus on local or global social hierarchies (Frank, 1985). The research fellow in the example would naturally act in ways that are consistent with the high status organizational level, providing support for team members and encouraging participation. However, such caring behaviors will threaten a team member who questions the research fellow's status. In other words, the high status behavior might appear to threaten the roles of other team members. Again, team members may doubt behaviors that are inconsistent with status or power (Greer, 2014). The key factor for evaluation becomes the degree to which members perceive status to be fair and justified. Because one team member believes that the research fellow does not deserve high status, tension and friction may erupt between the two.

The same explanation applies to the manager who has high global but low local power. Again, people are more likely to behave in ways appropriate to their most highly



ranked level (Frank, 1985). The manager will try to act in ways aligned with the customary behaviors associated with high power at the organizational level by trying to set agendas, norms for discussion, and standards for thought and opinion in team meetings. However, the team member who perceives that the manager lacks legitimate power will perceive the manager's assertive ideas and opinions to be unjustified. Again, the member may perceive that assertive behaviors threaten the legitimate role of another team member. Team members may doubt the legitimacy of the manager's behavior and may refuse to grant the manager the right to leadership (Greer, 2014). In sum, high organizational–low team level status inconsistency may activate feelings of threat and distrust, and thus trigger conflict with team members. Therefore, I propose:

*H15. Individuals who have high global status but low local status have more relationship conflict with team members than individuals who have any other combination of global and local status (high global status–high local status, low global status–low local status, or low global status–high local status).*

*H16. Individuals who have high global power but low local power have more process conflict with team members than individuals who have any other combination of global and local power (high global power–high local power, low global power–low local power, or low global power–high local power).*

My theoretical model and hypotheses have emphasized the links between power, task-focused behaviors, and process conflict as well as the links between status, relations-

focused behaviors, and relationship conflict. As mentioned, job applicants selectively consider whether to emphasize their local or global status when they seek employment (Frank, 1985). People tend to focus on their highest hierarchical level among various levels, and perform behaviors based on their highest rank. In other words, they tend to justify their behaviors based on their most beneficial level of status or power.

Regarding H15, individuals who have high organizational level status will try to perform relations-focused behaviors regardless of the grouping, team, or organization. Again, if the individual has low team status, those behaviors may instigate relationship conflict with team members. To return to the research fellow who is respected within the organization but disrespected by team members, the inconsistency may trigger relationship conflict. The research fellow would naturally act in ways consistent with the higher organization level status. Even within the team, the research fellow will provide support for team members and encourage participation. However, such behaviors threaten the team member who questions the research fellow's status and right to assume a role occupied by another team member. Conflict results as team members doubt the behaviors that are inconsistent with status or power levels (Greer, 2014).

H15 deals with the relationship between global/local status inconsistency and relationship conflict. I did not specify the level of power in global or local grouping, so I could not consider power here. The related outcome of "task-focused behaviors" is no issue; as long as the individual performs no task behaviors, legitimacy is not an issue. No one would be competing for task-related leadership roles. Therefore, not performing task-focused behaviors would not create process conflict. In sum, process conflict is irrelevant

for discussing global/local status inconsistency. Instead, process conflict is relevant for the discussion of H16: individuals who have high power at the organizational level will try to exert their power by performing task-focused behaviors regardless of the grouping, team, or organization. Again, those behaviors may instigate relationship conflict with team members if the actors have low team status. Aspirants and team members would not be competing for relations-focused leadership roles because they have no information about status. Not performing relations-focused behaviors would not create relationship conflict.

In the studies reported here, I have focused on high global but low local status (power) discrepancies, but I will not explore effects of low global but high local status (power) discrepancies. First, low global–high local status inconsistency would not cause relationship conflicts among team members as long as aspirants have high local status. H15 suggests that the combinations of high global status–high local status, low global status–low local status, or low global status–high local status will cause less conflict than high global status–low local status, the focal combination of interest. The same explanation is applicable to H16 that deals with high global power but low local power and process conflict. Certainly, low global but high local power (status) inconsistency will have consequences outside the team rather than within the team. Individuals who have low global but high local power may have difficulty leading organization-wide meetings, or they may have conflict with organizational members outside their team. Those are just a few examples of conflict based on my variables of interest, but low

global–high local power (status) inconsistency may have many other psychological and behavioral outcomes.

Further study should consider other factors that may affect conflict at organizational levels (e.g., culture, bureaucracy, injustice, departmentalization, policies, and practices) (Jehn & Rispens, 2008; Jha & Jha, 2010). However, my dissertation is focused on outcomes within a team, specifically potential leaders, their leadership behaviors, leadership emergence within teams, and conflict between team members. The outcome of low global but high local power (status) inconsistency will be mostly at the organizational level and is beyond the scope of the current study. In the discussion section, I discuss the topic as a possibility for future study.

### **Needs for Status (Power) as Moderating Inconsistency–Conflict Relationships**

My model assumes that team members compete for informal team leadership. Basically, in self-managing teams lacking formal leaders, members tend to compete for informal leadership (DeRue & Ashford, 2010). In competitive environments, team members are aware of the identity or role threats posed other team members (Greer, 2014; Tetlock, 2002). Members may feel threats to their social positions of power and status when they observe that aspirants are trying to lead team activities (De Cremer & van Dijk, 2005; Greer, 2014). Eventually, members and aspirants experience conflict if the behaviors are inconsistent with expectations based on power and status rankings (Magee & Galinsky, 2008).

Individuals who have high needs for power and status are especially driven to become informal leaders and will be most critical when evaluating the power and status

of fellow aspirants in relation to leadership behaviors. Therefore, team members who have high needs for power are more likely to be sensitive in evaluating other team members' behaviors, and will thus instigate more conflict if behaviors are misaligned. In contrast, if members have low needs for power or status, they will not see others as competitors in the social hierarchy and will be more generous in evaluating others' power and status, even if they try to lead in ways that are inconsistent with the social hierarchy. Thus, conflict is unlikely for individuals who have low need for power or status.

Therefore, I predict that needs for power and status play a moderating role:

*H17: Team member's needs for status strengthen the relationship between*

*(a) aspirants' power–status inconsistency and relationship conflict, and*

*(b) aspirants' global–local status inconsistency and relationship conflict.*

*H18: Team member's needs for power strengthen the relationship between*

*(a) aspirants' status–power inconsistency and process conflict, and (b)*

*aspirants' global–local power inconsistency and process conflict.*

## **STUDY 2 - LEADERSHIP EMERGENCE AND CONFLICT IN MBA STUDENT TEAMS**

### **Sample and Study Design**

I collected data from a sample of 104 first-year, fulltime, residential MBA students enrolled in a leadership course at a large mid-western U.S. university. By the time the leadership class began in spring 2017, the students had spent 4 months together. They attended a 2-week orientation program before the fall semester began, and took six

half-term courses together during the fall 2016 semester. They also attended social and job recruiting events outside the classroom. Consequently, they had already shaped an informal social hierarchy.

In this course, students were assigned to five-person self-managing teams to work together on case exercise projects, constituting 40% of their course grade. They completed cases as a group during each class and summarized their findings in a brief professional report format to present to the instructor. Team members met weekly in and outside the classroom to discuss their work.

The sample I gathered here included conditions allowing inherent controls for factors that were impossible to control in Study 1. First, the setting offered a common start and end point for the teams, which eliminated the time variant issue. Second, all teams were assigned the same team project. Third, the students had no formal hierarchy. Most important, the teams had no designated leaders, so all team members could claim and grant leadership during team activities.

Data were collected at three time points. At Time 1, before the spring semester A-term began, I used an online survey to measure personality traits, leadership style, needs for power and status, GMAT score, communication and respect networks, and perceptions of team members' power and status. At Time 2, the midpoint of the A-term course, I sent students a second email survey including items about self-confidence, leadership expectation, leadership behaviors, and conflict with team members during team activities. At Time 3, after the final exam and before they received grades for the

team project, I conducted the third online data collection including items about leadership behaviors, leadership emergence, and conflict with team members during team activities.

To ensure a high survey response rate, I asked a staff member in the MBA Office to invite students to participate via email before the spring semester began. I also asked the instructor of the leadership class and student representatives of the class of 2018 to encourage participation. On the first day of class, after I sent out the Time 1 online survey, I visited the classroom with paper copies and gave each student a \$10 Starbucks gift card. I briefly discussed the study and announced that I would conduct a lottery for those who participated in all three surveys, with \$200 going to seven lottery winners. After I sent out each online survey, I emailed multiple reminders. The final sample included 104 (Time 1 response rate = 98%; Time 2 = 89%; Time 3 = 88%).

## **Measures**

### **Predictors**

*Informal social power (global level).* Informal social power was measured with betweenness centrality using a social network questionnaire, as in Study 1. I provided an alphabetized list of all students' names in the cohort, with the instructions: "Please check the names of your classmates in the MBA program with whom you *communicate* for class-, school-, or job search information." The MBA students frequently exchange information about classes/courses, materials, curriculum, professors/instructors, job market, and industry. Actually, information is the only resource in this setting. All students were at the same "student" level of the formal hierarchy, so they had no other

resources to exchange such as budget or control over promotions. Therefore, in Study 2, I focused on information as a valued resource.

For supplemental analysis, I also considered the strength of the communication ties because power may exist on a continuum. Some power measures in previous studies used a seven-point Likert scale as the response (e.g., Hays & Bendersky, 2015). The single social network item, dichotomized measure of informal social power, may not reflect this possibility. Therefore, I asked a follow-up question: “How often do you communicate with the persons named?” using a five-point Likert scale, 1 = *never*, 2 = *sometimes*, 3 = *about half the time*, 4 = *most of the time*, and 5 = *always*. Then I calculated a standardized betweenness centrality in the communication network accounting for the strength of the ties.

*Informal social status (global level).* As in Study 1, I measured informal social status according to in-degree centrality in the respect network. I asked respondents to identify their respect relationships. Again, I provided an alphabetized list of all the classmates and requested: “Please check the names of your classmates in this MBA program whom you *respect, admire, or look up to.*”

Like power, status can exist on a continuum. For supplemental analysis, I also considered the strength of the respect ties. I asked, “How much do you respect, admire, look up to the persons named?” using a five-point Likert scale, 1 = *not at all*, 2 = *a little*, 3 = *moderately*, 4 = *a lot*, and 5 = *a great deal*. Then I calculated a standardized in-degree centrality in the respect network accounting for the strength of the ties.



*Informal social power and informal social status (local level).* To obtain the two types of social hierarchies at the team level, I used the same network survey as described in the global level. Here, both betweenness centrality in the communication network and in-degree centrality in the respect network were calculated at the team level, meaning that the boundary was not the network of the entire cohort of 102 students, but was rather the network of each five-member team.

*Needs for status/power.* I used three items modified from the SPF-IL Scale (Nieboer, Lindenberg, Boomsma, & Van Bruggen, 2005), to measure needs for status: “(1) I want people to look up to me; (2) I want to have good reputation with people; and (3) I want people to regard me as an important person.” The most common measures of needs for power are the Job Choice Exercise (Harrell & Stahl, 1981) and the Thematic Apperception Test (McClelland, 1961). However, these tests are time consuming in requiring participants to write about a series of pictures or to indicate preferences after reading about hypothetical jobs. I followed suggestions from Stahl, Grigsby, and Gulati (1985) and used a short, modified version of three multiple choice items based on various definitions of power: “(1) I want to control resources or other people; (2) I want people to think I am influential; and (3) I want to take a high position in a group or organization.”

*Team members’ perceptions of power/status.* I measured perceptions of power and status with a modified version of the measurement used by Anicich et al (2015). Students rated their perceptions of the power and status held by all other team members by answering, “To what extent does [team member A] have power?” and “To what extent does [team member A] have status?” Following Mayo, Meindl, and Pastor (2003), I used a single

item, social network type measure used in previous studies. Survey participants answered the same questions for multiple teammates. In keeping with my analysis of team member interactions, I asked the same question for multiple teammates. If I had used multi-item rather than single-item scales, the number of items would have increased exponentially because I would have needed full scales for perceptions of power/status (six items), two types of leadership behavior (25 items), and two types of conflict (seven items).

Respondents would have answered all those questions for each of five team members, equaling more than 200 items. Although single-item measures may cause measurement errors, they are better than multi-item measures because they reduce respondents' fatigue and efficiently measure the construct when items are sufficiently narrow and unambiguous (Sackett & Larson, 1990; Shah, Park, & Jones, working paper; Wanous, Reichers, & Hudy, 1997).

*Self-confidence.* I measured task self-confidence with nine items modified from Schwarzer and Jerusalem (1995). For example, "I can solve problems in my team if I try hard enough," "I am confident that I could deal efficiently with unexpected events in team activities," and "I can usually handle whatever comes my way during team activities."

*Leadership expectations.* I measured leadership expectations with a single item, "To what extent do you expect [team member A] to perform relations-focused leadership behaviors?" Team members rated their expectations for other team members' leadership behaviors on a five-point scale (1 = *not at all* and 5 = *to a great extent*). The aggregated

score from all team members was treated as the target individual's leadership emergence score.

### **Outcome variables**

*Leadership behaviors.* I measured individual leadership behaviors using the four-item scale from Hiller et al. (2006). Guided by the stem, "To what extent has [team member A] shown leadership behavior on your team by..." students then indicated whether the focal student had shown task-focused leadership behaviors of (1) facilitating team planning, organizing, setting goals, deciding how the team should conduct the simulation, organizing a plan, and (2) aiding team problem solving, determining the best course of action, quickly diagnosing problems, finding solutions, communicating well, using the combined expertise of the team, and adapting. They also indicated whether the focal student had exhibited relations-focused leadership behaviors by (1) providing support and consideration to team members who needed help, showing patience toward team members, fostering a cohesive team atmosphere, and maintaining a positive attitude, and (2) fostering development, mentoring, helping to develop each other's skills, and staying motivated even under challenges.

The items are sufficiently narrow, unambiguous, and brief, which should have reduced fatigue while efficiently measuring the constructs. I aggregated the scores from the two items for task-focused and relationship focused leadership behaviors and then averaged scores from all other team members.

*Leadership emergence.* I measured leadership emergence by asking, "To what degree does your team rely on [team member A] for leadership?" Again, participants evaluated

all team members for leadership emergence on a five-point scale (1 = *not at all* and 5 = *to a great extent*). I treated the aggregated score from all team members as the target individual's leadership emergence score, a type of measure also used in previous studies (e.g., Carson et al., 2007; Zhang et al., 2012).

*Relationship and process conflict (dyadic level)*. I measured relationship and process conflict at the dyadic level using a single-item measure. For relationship conflict, I used an item developed by Shah, Park, and Jones (working paper): "At times [team member A] and I have difficulty getting along (i.e., our personalities clash or our interactions result in friction or emotional conflict)." For process conflict, the item was: "At times [team member A] and I disagree about how to assign duties and resources (i.e., how much time to spend on teamwork and in meetings, and who should do what)."

### **Control variables**

Similar to my Study 1 methodology, I gathered demographic information including age, gender, and race. A meta-analysis conducted by Lord and colleagues (1986) demonstrated that intelligence and various individual traits (e.g., extraversion) are positively related to leadership. Therefore, I controlled for general mental ability (e.g., GMAT score), A-term course grades, and big 5 personality traits (Donnellan, Oswald, Baird, & Lucas, 2006). General leadership styles also affect leadership behaviors, and in turn, leadership emergence, so I controlled for task and relationship leadership styles (Pfeffer & Jones, 1974). As a control variable, I included the individual's leadership role in other classes in the model. To test hierarchy inconsistency–conflict relationships at the

dyadic level, I included power and status levels as control variables to account for actor–observer asymmetric power and status.

### **Analytic Strategy**

To calculate betweenness and in-degree centralities as measures of informal power and status, I used the social network software ORA-LITE (Carley, Pfeffer, Reminga, Storrick, & Columbus, 2012). To gather data about team-level informal power and status, I calculated the betweenness and in-degree centralities within the team network.

I applied a multilevel mixed-effects linear regression to analyze the data. The data structure is nested (e.g., individuals are nested in dyads, dyads are nested in teams) and crossed (e.g., one team member interacts with four team members). Observations (“individuals” for H5 – H12 and “dyads” for H13 – H18) are not independent of one another. This violates the assumption of an ordinary least square regression, and leads to incorrect standard errors, and in turn, incorrect inferences (Greene, 2003). The multilevel mixed-effects linear regression can account for the sources of non-independence. I included random coefficients for actor, observer, and team. These random coefficients were used to estimate the covariance across observations of the same actor and observer in the dyad as well as in the same team.

For H11 and H12, which suggest a moderating effect of consistency between the actor’s perception and the team members’ perception of actor’s status (power), I used the difference score between the actor’s perception and the team members’ perception of actor’s status (power) by subtracting actor’s perception of status (power) from team

members' perception of status (power), and created an interaction variable between this difference score and actor's status (power).

In testing H13 and H14, which suggest relationships between power–status inconsistency and conflict, and H15 and H16, which suggest relationships between global–local inconsistency and conflict, I created an interaction variable of power and status as well as an interaction variable of global power (status) and local power (status). I followed Anicich et al.'s (2015) procedure of examining the effect of high power–low status inconsistency on relationship conflict. Then I conducted a multilevel mixed-effects linear regression with power and status interaction terms. In addition, to test H17 and H18, which suggest the moderating effect of needs for power/status, I also applied group-mean centering for the predictors and checked whether a three-way interaction occurred among power, status, and needs for power (status) as well as a three-way interaction among global power (status), local power (status), and needs for power (status) in predicting conflict between team members.

A potential alternative explanation and reverse causal relationship may threaten internal validity. That is, leadership behaviors may lead to power and status. One way to secure internal validity is to eliminate ambiguous temporal precedence (Shadish, Cook, & Campbell, 2002). To avoid reverse causality, I used the independent variables (power and status) from Time 1 data collection, and dependent variables (leadership behaviors) from Time 2 data collection for H5 and H6. For H7 and H8, I used the independent variables (leadership behaviors) from Time 2 data collection, and dependent variables (leadership emergence) from Time 3 data collection. When testing mediation hypotheses H9 and H10,

I used the independent variables (power and status) from Time 1 data, the mediators (confidence and expectation) from Time 2 data, and dependent variables (leadership behaviors) from Time 3 data.

I assumed missing at random (MAR) and used full-information maximum likelihood estimator (FIML) in the analysis. All model estimations were conducted with “mixed” command in the software STATA 13 (StataCorp, 2013).

## **Results and Discussion**

Table 7 shows the descriptive statistics, reliability coefficients, and correlations at the individual level where the relationships between status/power and leadership were analyzed. Status and power had a correlation of .39, which shows that status and power are related yet distinct. Hypothesis 5 expected that individuals with high informal status are more likely than individuals with low informal status to perform relations-focused leadership behaviors. Hypothesis 6 expected that individuals with high informal power are more likely than individuals with low informal power to perform task-focused leadership behaviors. Table 8-1 and 8-2 show the results of regression analyses for the effects of power and status on leadership behaviors. Status was positively related to relations-focused leadership behaviors in Models 3 and 4 of Table 8-1 ( $\beta = 1.50, p < .05$ ;  $\beta = 1.59, p < .05$ ), but the effect disappeared when control variables—task-focused leadership style and people-focused leadership style—were entered in Models 5 and 6 ( $\beta = 1.45, p > .05$ ;  $\beta = 1.42, p > .05$ ). I found nonsignificant results for the effect of power on task-focused leadership behaviors. Therefore, Hypotheses 5 and 6 were not supported.

Hypothesis 7 predicted the mediation effects of leadership expectation between status and relations-focused leadership behavior, and Hypothesis 8 predicted the mediation effects of self-confidence between power and task-focused leadership behavior. Tables 9-1 and 9-2 show the results of structural equation modeling analysis for these mediation effects. Models 3 and 4 in Table 9-1 show that status led team members' expectations ( $\beta = 1.46, p < .05$ ;  $\beta = 1.75, p < .05$ ), and in turn, leadership expectation led actor's relations-focused leadership behaviors ( $\beta = .52, p < .01$ ;  $\beta = .50, p < .01$ ) in Models 3 and 4. However, the link between status and expectation disappeared ( $\beta = 1.20, p > .05$ ;  $\beta = 1.22, p > .05$ ) when control variables, task-focused leadership style, and people-focused leadership styles were entered in Models 5 and 6. The link between expectation and leadership behavior was still significant ( $\beta = .49, p < .01$ ;  $\beta = .50, p < .01$ ). I found nonsignificant results for the mediation effect of self-confidence between power and task-focused leadership behaviors. Therefore, Hypotheses 7 and 8 were not supported.

Table 10 shows the results of regression analysis for the effects of leadership behaviors on leadership emergence. Hypothesis 9 expected that team members are likely to grant leadership to individuals who perform relations-focused leadership behaviors, and Hypothesis 10 expected that team members are likely to grant leadership to individuals who perform task-focused leadership behaviors. Task-focused leadership behaviors were positively related to leadership emergence ( $\beta = .74, p < .01$ ), but I found nonsignificant effects for relations-focused leadership behaviors on leadership emergence ( $\beta = .04, p > .05$ ). Therefore, Hypothesis 10 was supported but not Hypothesis 9.



Hypothesis 11 predicted the moderation effects of consistency between actor's and others' perception on actor's status on the relationship between status and leadership emergence. Hypothesis 12 predicted the moderation effects of consistency between actor's and others' perception on actor's power on the relationship between power and leadership emergence. Table 11 shows the results of regression analysis for the moderation effects. No significant moderation effect was found for the consistency of status perception ( $\beta = -.73, p > .05$ ) or of power perception ( $\beta = 12.90, p > .05$ ). Therefore, Hypotheses 11 and 12 were not supported.

Table 12 shows descriptive statistics, reliability coefficients, and correlations at the dyadic level where I analyzed the relationships between status/power and conflict. In Hypothesis 13, I predicted that high power–low status individuals have more relationship conflict with team members than individuals who have any other status–power combination. In Hypothesis 14, I predicted that high status–low power individuals have more process conflict with team members. Table 13-1 shows the results of regression analysis for the effects of status–power inconsistency on relationship conflict. Table 13-2 shows the results of regression analysis for the effects of status–power inconsistency on process conflict. I found nonsignificant results for the effect of status–power inconsistency on relationship conflict ( $\beta = -49.81, p > .05$  in Model 6 of the Table 13-1) or on process conflict ( $\beta = 61.44, p > .05$  in Model 6 of the Table 13-2). Therefore, Hypotheses 13 and 14 were not supported.

In Hypothesis 15, I predicted that individuals who have high global status but low local status have more relationship conflict. In Hypothesis 16, I predicted that individuals

who have high global power but low local power have more process conflict. Table 14-1 shows the results of regression analysis for the effects of global–local status inconsistency on relationship conflict, and 14-2 shows the results of regression analysis for the effects of global–local power inconsistency on process conflict. Significant results were found for the effect of global–local status inconsistency on relationship conflict ( $\beta = -5.10, p < .05$  in Model 6 of the Table 14-1). Dyads had the highest expected relationship conflict when target individuals had high global status but low local status (1.40, when global status is mean + 1 SD and local status is mean – 1 SD). The expected values of relationship conflict from other combinations of global status and local status were 1.21 when global status was low (mean - 1 SD) and local status was high (mean + 1 SD), 0.93 when global status was high (mean + 1 SD) and local status was high (mean + 1 SD), and 1.32 when global status was low (mean - 1 SD) and local status was low (mean - 1 SD) (See Figure 3). I found nonsignificant results for the effects of global–local power inconsistency on process conflict ( $\beta = 104.95, p > .05$  in Model 6 of the Table 14-2). Therefore, Hypothesis 15 was supported, but not Hypothesis 16.

In Hypothesis 17, I predicted that needs for status strengthen the relationship between aspirants' (1) high power–low status inconsistency and relationship conflict, and (2) high global status–low local status inconsistency and relationship conflict. In Hypothesis 18, I predicted that needs for power strengthen the relationship between aspirants' (1) high status–low power inconsistency and process conflict, and (2) high global power–low local power inconsistency and process conflict. Tables 15-1, 15-2, 16-1, and 16-2 show the results of regression analysis for the moderation effects. I found a

significant result for the moderation effect of needs for status on the relationship between aspirants' global–local status inconsistency and relationship conflict ( $\beta = 4.35, p < .05$  in Model 6 of the Table 15-2) and for the moderation effect of needs for power on the relationship between aspirants' status–power inconsistency and process conflict ( $\beta = 180.94, p < .01$  in Model 6 of the Table 16-1). But I found nonsignificant results for the other two moderation effects. Therefore, Hypotheses 17 and 18 were partially supported.

The results from Study 2 complement the findings from Study 1 in which I found that status and power may have different effects on leadership emergence. In Study 2, I examined more closely the underlying mechanisms of how power and status differently affect leadership behaviors, and how these leadership behaviors influence team members to grant leadership in self-managing teams. The results indicate that aspirants' status may be associated with team members' expectations about aspirants' leadership role. Their expectations then affect aspirants' leadership behaviors. I also found that leadership behaviors are linked with leadership emergence, reinforcing Study 1.

The results also suggest that inconsistency between global and local status are related to conflict between team members. I argued that status and power would have similar impacts on leadership behaviors and on types of team conflict but found that only global level–local level status inconsistency causes relationship conflict. Furthermore, I found that high needs for status exacerbate relationship conflict.

## **GENERAL DISCUSSION**

Social hierarchy, a fundamental feature of social relations (Magee & Galinsky, 2008), has two functions that are especially important for teams that lack formal hierarchy: coordination and motivation. For example, self-managing teams lack formal hierarchy but need leadership that provides structure and focus, so status and power may play critical roles in affecting how informal leaders emerge and whether team members assent to their leadership.

I conducted two studies to examine social hierarchy as it impacts leadership and conflict in self-managing teams. I argue that individual structural positions in various social networks serve as the basis of the social hierarchy, which then affects the claiming and granting of leadership identity and the conflict that may rise in the process. Specifically, I explored the effects of status and power (1) on leadership emergence in teams, (2) on leadership emergence by team task type, and (3) leadership behaviors leading to leadership emergence. In addition, I explored (4) the effects on process and relationship conflict between team members resulting from status–power inconsistencies at team and organization levels.

To examine the proposed relationships, I took a structural perspective to provide a richer understanding of how status and power affect leadership emergence and conflict in teams. I collected two sets of data, one from a sample of project teams in a consulting company in South Korea and one from a sample of MBA student teams at a large mid-western university in the United States.

## **Theoretical Implications**

My investigation makes several important contributions to the current literature. First, I went beyond an individual approach and adopted a structural approach in searching for the antecedents of leadership emergence and conflict in teams. The results from both Study 1 and Study 2 show that status and power have unique impacts on leadership and conflict, even after controlling for variables such as personality traits that are the focus of individual approaches. Researchers have predominantly taken an individual approach (Judge, Piccolo, & Kosalka, 2009; Zaccaro Kemp, & Bader, 2004) and have explored many individual-level concepts such as personality, values, knowledge, and skills. The drawback of the individual approach is that it focuses only on leaders' innate characteristics. Instead, I align my work with studies that have begun to explore social hierarchy from a structural perspective (e.g., Anicich, Fast, Halevy, & Galinsky, 2015; Blader & Chen, 2011; Hays & Bendersky, 2015).

On a related note, I expand the structural boundary where power and status emerge. Previously, studies looked at power and status within dyads or teams (e.g., Blader & Chen, 2011; Hays & Bendersky, 2015). However, teams must continually check their direction and progress to confirm that their actions remain parallel to organizational guidelines, so it is critical to consider social relationships within and outside of teams. Accordingly, I considered the entire organization or entire cohort as the boundary where power and status emerge. By considering social interactions among team members and among the organization as a whole, I enhance understanding of leadership emergence in teams (Azumi & Hage, 1972; Filley, 1976; Hall, 1972). In addition, I

uncover the effects of social hierarchical consistencies/inconsistencies by exploring the effects of multiple forms of social hierarchy at two different levels, and thus I provide opportunity for further studies about other forms of social hierarchy at multiple levels.

Next, to elucidate the mechanism allowing social hierarchy to affect leadership emergence, I aligned my work with Carter, DeChurch, Braun, and Contractor (2015) who proposed that social networks are related to leadership and with Magee and Galinsky (2008) who proposed possible mediation and moderation between social hierarchy and behaviors. Thus, I examined when and how status and power affect leadership emergence and conflict in teams. Study 2 results suggest that the status of aspirant leaders may be associated with team members' expectations regarding the aspirants' leadership role, and the expectations then affect aspirants' leadership behaviors. I also found that when team members have high needs for status, (1) social hierarchy inconsistency in different forms and (2) social hierarchy inconsistency at different levels are more seriously related to team relationship and process conflict. This suggests the possibility of other mediation and moderation mechanisms between social hierarchy and team behaviors.

My studies also expand social network and social hierarchy discussions by adding the concept of status to the concept of power. Across Study 1 and Study 2, I measure informal social power and informal social status separately. The results show that individuals who have high informal organizational and team social status are more likely to perform task-focused leadership behaviors and emerge as leaders. In addition, results show that individuals who have conflicting global–local status may have more conflict with team members. This suggests that status is obviously distinguishable construct from

power, and it has distinct impacts on leadership and conflict. Power has received the focus of past social network studies (e.g., Krackhardt & Brass, 1994), partly because researchers have interchanged power and status (Blader & Chen, 2011). Although the sociology discipline focuses on socioeconomic status (e.g., gender and ethnicity), the social hierarchy literature has failed to consider status as a distinct construct in organizational or social network studies, except for a few who have differentiated the effects of power and status (e.g., Anicich et al., 2015; Blader & Chen, 2011; Hays & Bendersky, 2015). However, those studies measured perception of status raters, which may not be rigorous enough to capture the structural aspect of status. Social network theory explains that various patterns of social arrangements and tie contents can capture interpersonal relationships in organizations (Wasserman & Faust, 1994). I argue that the social network perspective should also be used to study informal social status.

### **Practical Implications**

The two studies have practical implications for leaders and aspiring leaders. First, the findings from Study 1 suggest that social hierarchy, especially informal status, plays a critical role in leadership emergence. Status and power are shown to be two forms of informal social hierarchy apart from formal hierarchical organizational rankings, with status significantly affecting leadership emergence even after controlling for formal hierarchy. Managers are advised to carefully consider individuals' structural characteristics such as informal status and informal power in addition to innate characteristics when forming teams and assigning leaders. Pioneer companies such as Google, 3M, and Core and Association have adopted a unique approach in designing

organizational structure: they form temporary, project-based “self-organizing teams” typically to handle new opportunities, product concepts, and businesses. Leadership then emerges as teams are frequently formed and discharged.

A related implication is that employees must understand their own informal status and informal power structural positions if they aspire to team leadership positions. I show that people expect leadership behaviors that are aligned with informal status. That is, they have higher expectations for high status individuals to take leadership roles. Their higher expectations may then cause them to perceive legitimacy in leadership behaviors. Leaders and aspiring leaders who want team members to grant leadership are advised to maintain or enhance their informal social status in the organization.

Next, employees should adhere to roles that are suited to their informal social hierarchy positions. The results of Study 2 show that individuals who have high global status but low local status experience more relationship conflict with team members. Consequently, employees must act appropriately in accordance with their informal social ranks in multiple social hierarchy and organizational dimensions to prevent conflict with team members and to better contribute to team performance. If employees try to perform leadership behaviors that are misaligned with their power or status, they can cause conflict. Moreover, employees may have multiple forms of inconsistent social hierarchy ranks in organizations. They should keep in mind that forms and levels of multiple hierarchies should be balanced to reduce relationship conflict between team members. In addition, my studies suggest that team members’ needs for power and status play



important roles in status/power and conflict relationship. Employees need to understand their own and other's needs in order to prevent possible conflict.

### **Limitations and Future Research Directions**

The two studies have limitations that future research should address. First, status and power levels may have changed during the data collection period. In both Study 1 and Study 2, I measured informal status and informal power at the beginning of the data collection using a social networks questionnaire. Informal status and informal power were determined by the interactions or ties among organizational and team members and may have changed by the time I collected outcome variables. The issue could have more serious impacts in Study 1 where I measured dependent variables two years after I measured independent variables. Future studies should consider the possibility that interactions or ties among organizational and team members change, with altered effects on informal status and power.

Furthermore, future research should consider other types of within-team ties more closely. I focused on communication and respect ties, but other team relationships can critically influence team activities. For example, future study could examine how many team members previously worked together or how many times they collaborated for influences on leadership emergence or team conflict.

Next, some models have common method bias. To avoid the problem, I used different sources to gather data regarding antecedents and consequences. For example, in Study 1, I measured all organizational members for status and power and measured leadership emergence using the company's HR records. In addition, I separated

independent variables, mediating/moderating variables, and dependent variables by time in all analyses. However, I used the same source—team members—to gather expectations and leadership behaviors. Although I measured expectations at the course midpoint, and leadership behaviors in the last week of the course, common method bias is still a concern. Some researchers regard leadership behaviors and leadership emergence as the same concept, so validity may be an issue. However, observing leadership behaviors is not the same as considering an individual to be a leader. Theoretically, leadership behaviors and leadership emergence are separate, distinct concepts. For example, Mann's three explanations distinguished the two concepts and both have been measured distinctively in previous empirical studies (e.g., Neubert & Taggar, 2004). I found task-focused leadership behavior to have a .70 correlation with leadership emergence and relations-focused leadership behavior to have a .60 correlation with leadership emergence. Moreover, I found significant results for the effect of task-focused leadership behavior on leadership emergence but not for relations-focused leadership behavior. Future studies should find more rigorous ways to guarantee the validity of leadership behaviors and leadership emergence.

Finally, all types of conflict in this sample were very low and showed little variation at the team and dyadic level. Therefore, I found little support for my hypotheses about the relationship between hierarchy inconsistency and conflict. Only one hypothesis was fully supported. The students in this sample had already spent 5 months together during the first semester. They had probably already experienced conflict between team members and had discovered resolutions after taking six MBA courses together. To

prevent the high conflict that is often common in teams of MBA students, the course syllabus stated: “If you have a problem with a group member, document it so I can see how the situation progresses.” The syllabus admonition may be another reason explaining why students reported low ratings for conflict and may have contributed to the lack of significant results for hypotheses about the effect of power/status inconsistency on conflict. Future studies should look more carefully for samples of teams that are experiencing more noticeable conflict.

## **CONCLUSION**

In this dissertation, I have examined two important forms of informal social hierarchy— status and power—and have theorized their effects on leadership emergence and conflict in teams. I conducted two field studies and produced findings suggesting that status and power are related yet distinct concepts and have different impacts on leadership emergence and conflict in teams. Although both are positively related to leadership emergence during team formation stages, status has more effects on leadership emergence in teams that deal with highly uncertain projects. Power, however, has no effect on leadership emergence regardless of task uncertainty. Status and power also play important roles in team processes. Status affects members’ expectations, which then lead to leadership behaviors. Team members who have high status at the organizational level but low status at the team level seem to experience more relationship conflict. Conflict is exacerbated when counterparts have high needs for status.

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Table 1. Emergent leadership in recent studies

	Study 1	Study 2	Previous studies
Definition	(likelihood of) an individual is designated to be in leadership positions of teams by the members in an organization	a property whereby leadership is distributed in team members	<ul style="list-style-type: none"> <li>- Carson et al., 2007: Shared leadership, a team property whereby leadership is distributed among team members rather than focused on a single designated leader</li> <li>- Wang et al., 2014: Shared leadership, an emergent team property of mutual influence and shared responsibility among team members, whereby they lead each other toward goal achievement</li> <li>- Zhang et al., 2012: A member achieves influence over other team members in terms of direction, motivation, and task behavior</li> <li>- Neubert &amp; Taggar, 2004: Process of role taking and peer perceptual process that determine who become leader</li> </ul>
Number of emergent leader	1 single leader in a team	Multiple leaders in a team	<ul style="list-style-type: none"> <li>- Carson et al., 2007: Multiple leaders</li> <li>- Wang et al., 2014: Multiple leaders</li> <li>- Zhang et al., 2012: Multiple leaders</li> <li>- Neubert &amp; Taggar, 2004: Multiple leaders</li> </ul>
Formal vs informal	Formal	Informal	<ul style="list-style-type: none"> <li>- Carson et al., 2007: Informal</li> <li>- Wang et al., 2014: Informal</li> <li>- Zhang et al., 2012: Informal</li> <li>- Neubert &amp; Taggar, 2004: Informal</li> </ul>
Possible candidates / boundary	Anyone in the organization	Anyone in the team	<ul style="list-style-type: none"> <li>- Carson et al., 2007: Anyone in the team</li> <li>- Wang et al., 2014: Anyone in the team</li> <li>- Zhang et al., 2012: Anyone in the team</li> <li>- Neubert &amp; Taggar, 2004: Anyone in the team</li> </ul>

Measure as proportion	yes	yes	<ul style="list-style-type: none"> <li>- Carson et al., 2007: no, as network</li> <li>- Wang et al., 2014: N/A (meta-analysis)</li> <li>- Zhang et al., 2012: yes</li> <li>- Neubert &amp; Taggar, 2004: yes</li> </ul>
Perspective	Predictor (power and status) is viewed from a structural perspective	Predictor (power and status) is viewed from a structural perspective	<ul style="list-style-type: none"> <li>- Carson et al., 2007: outcome (leadership) is viewed as network</li> <li>- Wang et al., 2014: N/A (meta-analysis)</li> <li>- Zhang et al., 2012: no, outcome (leadership) is viewed as average</li> <li>- Neubert &amp; Taggar, 2004: no, outcome (leadership) is viewed as proportion</li> </ul>

Table 2. Status and Power

	Status	Power
Definition in the current study	The extent to which an individual is respected or admired by others (Magee & Galinsky, 2008).	Control over valued resources in social relations (Magee & Galinsky, 2008).
Other definitions	<ul style="list-style-type: none"> <li>- An individual's relative standing in a group based on prestige, honor, and voluntary deference (Kilduff, Willer, Anderson, 2016)</li> <li>- Patterned inequalities of respect, deference, and influence among a group of people (Ridgeway &amp; Walker, 1995)</li> <li>- Attention/visibility: the regarding of someone as interesting or important (Anderson et al., 2001)</li> <li>- Ability to influence: the capacity to have an effect on the behavior of someone or something, or the effect itself (Ridgeway &amp; Correll, 2006)</li> </ul>	<ul style="list-style-type: none"> <li>- An individual's relative capacity to modify others' states by providing or withholding resources or administering punishments (Keltner, Gruenfeld, &amp; Anderson, 2003)</li> <li>- Ability to influence others more easily and perform one's job more effectively (Anderson &amp; Brion, 2014)</li> <li>- Potential to influence via reward, expertise, legitimacy, and information <ul style="list-style-type: none"> <li>* legitimate power: formal hierarchy such as organizational position/title</li> <li>* referent power: the extent to which others want to associate with an individual (French and Raven, 1959)</li> </ul> </li> </ul>
Antecedent / sources	<ul style="list-style-type: none"> <li>- Stereotype such as gender and ethnicity as well as personal traits such as warmth and competence (Cuddy, Fiske, &amp; Glick, 2008).</li> <li>- Reputation (Anderson &amp; Shirako, 2008)</li> <li>- Interpersonal interaction among organizational members (Ridgeway et al., 1998).</li> </ul>	<ul style="list-style-type: none"> <li>- Age, gender, Race (Bunderson, 2003; Eagly, 1987)</li> <li>- Personal traits: narcissism (Brunell et.al., 2008), dominance (Anderson &amp; Kilduff, 2009)</li> <li>- Bureaucratic structure (Weber, 1968)</li> <li>- Resource dependency (Salancik &amp; Pfeffer, 1978)</li> <li>- Social networks (Brass, 2002, Burt, 1992)</li> </ul>

Consequences / related qualities	<ul style="list-style-type: none"> <li>- Orients people outwardly and focuses on their relationships with others (Blader &amp; Chen, 2012; Galinsky et al., 2008).</li> <li>- Engages in helping and cooperation (Cheng, Tracy, &amp; Henrich, 2010; Willer, 2009).</li> <li>- Considers needs of others (Blader et al., 2013; Galinsky et al., 2006).</li> <li>- Takes others' perspective and opinion (Blader &amp; Chen, 2012)</li> <li>- Enact justice and evaluate others with fairness (Blader &amp; Chen, 2012)</li> <li>- Status drives observer's expectation on target individual's behaviors and performance (Magee &amp; Galinsky, 2008)</li> <li>- Status determines how people evaluate others' behaviors (Humphrey, 1985)</li> <li>- Shapes target's performance itself, "Pygmalion effect" (Eden &amp; Ravid, 1982)</li> <li>- Give better opportunities for advancement (Ospina, 1996)</li> </ul>	<ul style="list-style-type: none"> <li>- Power keeps psychological distance from team members (Kipnis, 1972)</li> <li>- Ability to set agendas, norms for discussion, rules for behaviors, and standard for opinion (Magee &amp; Galinsky, 2008)</li> <li>- Speak more and interrupt frequently during a group discussion (Brown &amp; Levinson, 1987)</li> <li>- Express attitude and emotion straightforwardly (Brinol et al., 2007)</li> <li>- Action-oriented, especially goal-directed actions (Galinsky et al., 2003)</li> <li>- Reduce awareness of other people, self-centered (Van Kleef et al., 2006)</li> <li>- Less likely take others' opinion and perspectives (Galinsky et al. 2006)</li> <li>- Derogate subordinates (Overbeck &amp; Park, 2001) or threaten others (Mead &amp; Maner, 2012)</li> </ul>
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Table 3. High uncertainty tasks vs. Low uncertainty tasks

High uncertainty tasks	Low uncertainty tasks	Sources
1) have a range of appropriate responses 2) take longer to complete 3) assess a range of knowledge or skills 4) provide opportunity for team member to demonstrate higher level of understanding 5) have a lack of predictability of inputs, processes, and outputs when the work is performed 6) have high probability that a task may fail and require re-work	1) have a few correct/compelling answer 2) take short period of time to complete 3) assess a specific of knowledge or skills 4) provide less opportunity for team member to demonstrate higher level of understanding 5) have a high degree of predictability of inputs, processes, and outputs when the work is performed 6) have low probability that a task may fail and require re-work	Cordery, Morrison, Wright, & Wall, (2010); Kim & Burton, (2002); Baldwin, Ford, & Blume, (2009); Blume, Ford, Baldwin, & Huang, (2010); Salas, Milham, & Bowers, (2003); Yelon & Ford, (1999); and mathematics training website

Table 4  
*Study 1 Descriptive Statistics, Reliability Coefficients, and Correlations*

	Variable	Mean	SD	1	2	3	4	5	6	7	8
1	Leadership emergence	0.33	0.37	<i>n.a.</i>							
2	Average uncertainty of projects involved	2.11	0.82	0.22*	<i>n.a.</i>						
3	Power	0.005	0.008	0.30*	0.19	<i>n.a.</i>					
4	Status	0.035	0.056	0.61*	0.33*	0.40*	<i>n.a.</i>				
5	Gender	0.31	0.46	-0.19*	-0.11	-0.09	-0.21*	<i>n.a.</i>			
6	Age	37.93	6.92	0.56*	0.00	0.04	0.60*	-0.39*	<i>n.a.</i>		
7	Organizational rank	3.31	0.98	0.61*	0.02	0.02	0.58*	-0.23*	0.84*	<i>n.a.</i>	
8	Organizational tenure	8.72	6.62	0.67*	0.05	0.07*	0.55*	-0.36*	0.85*	0.80*	<i>n.a.</i>
9	Education	2.12	0.41	0.26*	-0.18	0.19*	0.33*	-0.09	0.42*	0.39*	0.38*
10	On leave	0.05	0.22	0.10	0.23	-0.09	-0.05	-0.08	0.00	-0.12	0.03
11	Openness to experience	3.48	0.73	0.15	0.11	0.06	-0.12	0.01	-0.11	-0.05	-0.05
12	Conscientiousness	3.41	0.79	0.00	0.03	0.01	-0.10	0.24	-0.11	0.00	-0.09
13	Extraversion	2.75	0.90	0.06	0.02	0.12	-0.09	0.26	-0.22	0.03	-0.16
14	Agreeableness	3.41	0.77	0.00	0.01	-0.12	-0.18	0.15	-0.07	-0.03	-0.03
15	Neuroticism	2.72	0.67	-0.04	-0.04	-0.01	0.17	0.12	0.20	0.16	-0.01
16	Number of project involved	9.21	4.24	-0.11	0.06	0.15	0.35*	-0.15	0.13	0.06	-0.04
17	Average number of available projects	20.42	1.85	-0.05	0.05	0.08	0.08	0.17	-0.15	0.00	-0.15
		<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	
9	Education	<i>n.a.</i>									
10	On leave	-0.06	<i>n.a.</i>								
11	Openness to experience	-0.25	-0.04	1.00							
12	Conscientiousness	0.11	-0.05	-0.22	1.00						
13	Extraversion	-0.03	-0.11	0.41*	-0.06	1.00					
14	Agreeableness	0.01	0.11	0.41*	0.19*	0.24*	1.00				
15	Neuroticism	0.09	0.01	-0.05	-0.32*	-0.08	-0.39*	1.00			
16	Number of project involved	0.00	-0.21*	-0.05	-0.29	-0.16	-0.19	0.32	<i>n.a.</i>		
17	Average number of available projects	-0.08	-0.27	-0.17	0.07	0.24	-0.25	-0.10	-0.13	<i>n.a.</i>	

Note. N = 101; \* p<0.05; coefficient alpha reliabilities are reported on the diagonal

Table 5

*Results of Regression Analysis for the Effects of Power and Status on Leadership Emergence*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	0.16**	-0.54**	-0.54**	-0.43**	-0.35	0.24
Power	4.20	5.61**	5.68**	5.56**	3.90	3.89
Status	4.08**	1.70**	1.70**	1.96**	1.98**	2.02**
Gender		0.00	0.00	-0.01	0.05	0.06
Org rank		0.20**	0.20**	0.19**	0.19**	0.20**
Education		0.06	0.06	0.05	0.06	0.04
On leave			0.03	-0.02	-0.07	-0.10
Openness to experience					0.06	0.06
Conscientiousness					0.01	0.02
Extraversion					0.00	0.01
Agreeableness					-0.04	-0.06
Neuroticism					-0.07	-0.08
Number of project involved				-0.01	-0.01	-0.01
Average number of available project						-0.03
Observations	101	101	101	101	72	72
R-squared	0.46	0.66	0.66	0.66	0.66	0.67

Note. \*  $p < 0.05$ , \*\*  $p < 0.01$ ; values are unstandardized regression coefficients

Table 6

*Results of Regression Analysis for the Effects of Power and Status on Task Uncertainty*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	1.86**	3.23**	3.21**	3.16**	2.73*	0.88
Power	10.25	9.87	10.49	10.57	7.61	7.30
Status	3.07	4.66*	4.60*	4.49*	5.94*	5.66*
Gender		-0.11	-0.09	-0.09	-0.25	-0.26
Org rank		-0.05	-0.04	-0.03	-0.18	-0.18
Education		-0.55*	-0.58*	-0.57*	-0.74*	-0.70*
On leave			0.38	0.40	0.32	0.56
Openness to experience					0.03	0.07
Conscientiousness					0.16	0.15
Extraversion					-0.01	-0.05
Agreeableness					0.14	0.18
Neuroticism					0.07	0.09
Number of project involved				0.00	0.01	0.01
Average number of available project						0.08
Observations	64	64	64	64	50	50
R-squared	0.12	0.21	0.22	0.22	0.34	0.35

*Note.* \*  $p < 0.05$ , \*\*  $p < 0.01$ ; values are unstandardized regression coefficients



Table 7

*Study 2 Descriptive Statistics, Reliability Coefficients, and Correlations for H5 - H12*

Variable		Mean	SD	1	2	3	4	5	6	7
1	Leadership emergence	2.99	0.67	<i>n.a.</i>						
2	Task-focused leadership behavior	3.51	0.57	0.70*	<i>n.a.</i>					
3	Relation-focused leadership behavior	3.34	0.56	0.60*	0.79*	<i>n.a.</i>				
4	Power	0.01	0.01	0.01	-0.09	-0.03	<i>n.a.</i>			
5	Status	0.17	0.10	0.22	0.20	0.18	0.39*	<i>n.a.</i>		
6	Self perception on power	3.49	0.73	0.02	0.05	0.10	0.00	0.10	<i>n.a.</i>	
7	Others' perception on power	3.25	0.51	0.61*	0.76*	0.65*	-0.01	0.36*	0.03	<i>n.a.</i>
8	Self perception on status	3.54	0.92	-0.01	-0.04	-0.01	0.12	0.10	0.67*	0.03
9	Others' perception on status	3.30	0.57	0.42*	0.69*	0.62*	-0.01	0.20*	0.00	0.75*
10	Self-confidence	4.25	0.49	0.25*	0.11	0.12	0.03	0.15	0.20*	0.12
11	Leadership expectation	3.41	0.64	0.68*	0.82*	0.78*	0.09	0.22	0.04	0.68*
12	Age	28.37	3.59	-0.07	-0.01	-0.11	0.01	-0.19	0.07	-0.12
13	Gender	0.31	0.47	0.15	0.14*	0.02	0.22	0.05	0.01	-0.03
14	Ethnicity	0.74	0.44	0.20*	0.14	0.14	0.04	0.31*	0.18	0.04
15	Previous grade	168.12	15.76	0.17	0.25*	0.10	-0.06	0.06	0.10	0.20*
16	General mental ability	675.53	51.90	-0.03	-0.04	-0.03	-0.09	0.34*	-0.07	0.08
17	Years of experience	5.21	3.08	-0.02	0.01	-0.07	0.05	-0.11	0.08	-0.05
18	Extraversion	3.36	0.74	-0.01	0.00	0.11	0.26	0.30*	0.10	0.06
19	Agreeableness	3.97	0.61	0.10	0.01	0.16	0.29*	0.06	0.20	0.00
20	Conscientiousness	3.74	0.67	0.14	0.08	0.18	0.18	-0.07	0.15	0.16
21	Neuroticism	2.55	0.78	0.17	0.34*	0.24*	-0.11	-0.18	-0.10	0.04
22	Openness	3.92	0.65	-0.09	-0.17	-0.03	0.14	-0.03	0.14	-0.17
23	Leadership style - relations	3.55	0.64	0.06	0.13	0.15	0.23*	0.20	0.19*	0.16
24	Leadership style - task	4.05	0.56	0.09	-0.02	0.13	0.00	-0.02	0.11	-0.06
25	Leadership role in other class	0.65	0.48	0.21	0.11	0.16	0.21	0.17*	0.12	0.09
		8	9	10	11	12	13	14	15	16
8	Self perception on status	<i>n.a.</i>								
9	Others' perception on status	-0.06	<i>n.a.</i>							

<b>10</b>	Self-confidence	0.21*	-0.06	0.89						
<b>11</b>	Leadership expectation	0.03	0.66*	0.17	<i>n.a.</i>					
<b>12</b>	Age	0.06	-0.15	0.07	-0.13	<i>n.a.</i>				
<b>13</b>	Gender	-0.03	-0.08	-0.20	0.05	0.01	<i>n.a.</i>			
<b>14</b>	Ethnicity	-0.08	0.09	0.19*	0.11	0.10	0.00	<i>n.a.</i>		
<b>15</b>	Previous grade	0.07	0.14	-0.04	0.24	-0.13	-0.14	-0.14	<i>n.a.</i>	
<b>16</b>	General mental ability	0.14	-0.04	0.14	0.03	-0.30*	-0.30*	-0.09	0.33*	<i>n.a.</i>
<b>17</b>	Years of experience	0.09	-0.15	0.12	-0.10	0.93*	-0.03	0.02	-0.13	-0.27*
<b>18</b>	Extraversion	0.07	0.15	0.03	0.04	-0.15	0.14	0.32*	-0.07	0.04
<b>19</b>	Agreeableness	0.09	-0.07	0.10	0.12	-0.06	0.35*	-0.07	0.07	-0.02
<b>20</b>	Conscientiousness	0.12	0.18	0.06	0.09	0.13	0.03	-0.05	-0.10	-0.30*
<b>21</b>	Neuroticism	-0.21	0.19	-0.26*	0.21*	-0.07	0.27*	-0.13	0.16	-0.08
<b>22</b>	Openness	0.03	-0.02	-0.02	-0.03	0.09	0.02	0.15	-0.26	-0.16
<b>23</b>	Leadership style - relations	0.14	0.11	0.23*	0.16	0.02	0.03	0.20	-0.10	-0.10
<b>24</b>	Leadership style - task	0.07*	-0.03	0.20*	0.06	-0.21*	-0.15	0.04	-0.09	-0.13
<b>25</b>	Leadership role in other class	0.03	0.05	0.38*	0.17	-0.02	0.02	0.17	-0.07	-0.05
		<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>
<b>17</b>	Years of experience	<i>n.a.</i>								
<b>18</b>	Extraversion	-0.19	0.76							
<b>19</b>	Agreeableness	-0.06	0.21*	0.74						
<b>20</b>	Conscientiousness	0.19	-0.10	0.02	0.67					
<b>21</b>	Neuroticism	-0.12	0.01	0.20	-0.27*	0.76				
<b>22</b>	Openness	0.06	0.20	0.14	0.07	-0.13	0.72			
<b>23</b>	Leadership style - relations	-0.03	0.21*	0.01	0.23*	-0.12	0.06	<i>n.a.</i>		
<b>24</b>	Leadership style - task	-0.12	0.05	0.10	0.14	-0.09	0.36*	-0.07	<i>n.a.</i>	
<b>25</b>	Leadership role in other class	0.05	0.05	0.05	0.02	-0.14	0.06	0.05	0.10	<i>n.a.</i>

*Note.* N = 104; \*  $p < 0.05$ ; coefficient alpha reliabilities are reported on the diagonal

Table 8-1  
*Results of Regression Analysis for the Effects of Status on Relation-focused Leadership Behavior*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Power	-3.69	-4.07	-10.34	-13.91	-17.23	-15.69
Status	0.74	0.61	1.50*	1.59*	1.45	1.42
Age		-0.02	-0.03	-0.04	-0.04	-0.04
Gender		0.10	-0.01	-0.15	-0.13	-0.07
Ethnicity		0.17	0.10	0.18	0.15	0.07
Previous grade			0.00	0.00	0.00	0.00
General mental ability			0.00	0.00	0.00	0.00
Years of experience			0.02	0.03	0.04	0.04
Extraversion				0.03	0.04	0.04
Agreeableness				0.15	0.14	0.15
Conscientiousness				0.26*	0.26*	0.25*
Neuroticism				0.26**	0.31**	0.28*
Openness to experience				-0.02	-0.02	-0.02
Leadership style - relations					0.10	0.10
Leadership style - task					0.06	0.03
Leader role in other class					0.21	0.21
Gender diversity in team						-0.30
Ethnicity diversity in team						-0.19
Constant	3.24**	3.64**	4.61**	2.22	0.86	1.13
Observations	104	100	83	83	76	76
R-squared	0.02	0.05	0.10	0.27	0.31	0.32

Note. \* p<0.05, \*\* p<0.01; values are unstandardized regression coefficients

Table 8-2

*Results of Regression Analysis for the Effects of Power on Task-focused Leadership Behavior*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Power	-6.72	-8.90	-16.48	-13.61	-17.23	-16.29
Status	0.90	0.77	1.59*	1.66*	1.76	1.75
Age		-0.01	-0.02	-0.04	-0.03	-0.02
Gender		0.26	0.20	0.12	0.13	0.17
Ethnicity		0.12	0.15	0.22	0.18	0.13
Previous grade			0.01**	0.01	0.01	0.01
General mental ability			0.00	0.00	0.00	0.00
Years of experience			0.04	0.05	0.04	0.04
Extraversion				-0.04	-0.05	-0.04
Agreeableness				-0.04	-0.06	-0.06
Conscientiousness				0.18	0.17	0.16
Neuroticism				0.29**	0.34**	0.32**
Openness to experience				-0.04	-0.05	-0.05
Leadership style - relations					0.12	0.13
Leadership style - task					0.03	0.02
Leader role in other class					0.17	0.17
Gender diversity in team						-0.23
Ethnicity diversity in team						-0.11
Constant	3.41**	3.44**	3.16**	2.08	1.14	1.35
Observations	104	100	83	83	76	76
R-squared	0.03	0.08	0.21	0.34	0.39	0.39

Note. \*  $p < 0.05$ , \*\*  $p < 0.01$ ; values are unstandardized regression coefficients

Table 9-1

*Results of Structural Equation Modeling Analysis for the Mediation Effects of Leadership expectation between Status and Relation-focused Leadership Behavior*

	Leadership expectation						Relation-focused leadership behavior					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Leadership expectation							0.49**	0.48**	0.52**	0.50**	0.49**	0.50**
Status	0.89	0.76	1.46*	1.75*	1.20	1.22	-0.32	-0.48	-0.26	-0.42	-0.65	-0.64
Age		-0.03	-0.03	-0.04	-0.03	-0.03		0.01	-0.01	0.01	-0.01	-0.01
Gender		0.16	0.07	-0.04	-0.04	0.09		-0.03	-0.14	-0.16	-0.16	-0.17
Ethnicity		0.15	0.17	0.26	0.20	0.13		0.23*	0.16	0.21*	0.21*	0.11
Previous grade			0.01*	0.01	0.01*	0.01*			0.00	0.00	0.00	0.00
General mental ability			0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Years of experience			0.01	0.03	0.02	0.02			0.02	0.00	0.02	0.02
Extraversion				-0.11	-0.09	-0.08				0.03	0.03	0.03
Agreeableness				0.07	0.05	0.07				0.12	0.15*	0.15*
Conscientiousness				0.14	0.15	0.12				0.23**	0.25**	0.26**
Neuroticism				0.26**	0.28**	0.24*				-0.03	-0.01	-0.03
Openness to experience				0.03	0.05	0.05				-0.02	0.01	0.00
Leadership style - relations					0.13	0.15					-0.02	-0.02
Leadership style - task					0.03	-0.01					-0.01	-0.03
Leader role in other class					0.22	0.24					0.10	0.09
Gender diversity in team						-0.73*						0.21
Ethnicity diversity in team						-0.03						-0.43*
Constant	3.27**	3.86**	3.09	1.96	0.40	1.07	1.54**	1.08**	3.28**	1.17	0.92	0.71
Observations	104	100	83	83	76	76	104	100	83	83	76	76
Log likelihood							-60.86	-440.5	-1273	-1649	-1659	-1606

Note. \* p<0.05, \*\* p<0.01; values are unstandardized regression coefficients

Table 9-2

*Results of Structural Equation Modeling Analysis for the Mediation Effects of Self-confidence between Power and Task-focused Leadership Behavior*

	Self-confidence						Task-focused leadership behavior					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Self-confidence							0.23	0.24	0.252	0.271	0.272	0.301
Power	4.40	4.11	2.40	-2.01	-6.31	-6.41	-4.38	-8.12	-8.72	-8.80	-8.72	-6.21
Age		0.01	-0.05	-0.04	-0.01	-0.01		-0.03	-0.10	-0.09	-0.08	-0.08
Gender		-0.16	-0.16	-0.19	-0.12	-0.15		0.31*	0.22	0.12	0.12	0.25
Ethnicity		0.25*	0.24	0.25*	0.15	0.17		0.31*	0.40*	0.51**	0.51**	0.37*
Previous grade			0.00	0.00	0.00	0.00			0.01	0.01	0.01	0.01
General mental ability			0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00
Years of experience			0.08	0.07	0.04	0.04			0.09	0.07	0.07	0.06
Extraversion				-0.01	-0.04	-0.04				-0.07	-0.07	-0.06
Agreeableness				0.21*	0.18*	0.18*				0.07	0.07	0.08
Conscientiousness				0.01	-0.03	-0.02				0.31**	0.31**	0.28**
Neuroticism				-0.13	-0.09	-0.08				0.27**	0.27**	0.23*
Openness to experience				-0.08	-0.13	-0.13				-0.01	-0.01	-0.02
Leadership style - relations					0.20**	0.20**					-0.02	-0.01
Leadership style - task					0.21*	0.22*					0.00	-0.06
Leader role in other class					0.33**	0.33**					0.02	0.02
Gender diversity in team						0.19						-0.65
Ethnicity diversity in team						0.01						-0.30
Constant	4.21**	3.84**	4.44**	4.37**	1.79	1.62	2.32**	2.85**	4.40*	1.72	1.72	2.26
Observations	93	90	76	76	76	76	93	90	76	76	76	76
Log likelihood							647.8	-764	-3921	-5292	-5893	-5665

Note. \* p<0.05, \*\* p<0.01; values are unstandardized regression coefficients

Table 10

*Results of Regression Analysis for the Effects of Leadership Behaviors on Leadership Emergence*

	Model					
	1	Model 2	Model 3	Model 4	Model 5	Model 6
Relation-focused leadership behavior	0.21	0.16	0.17	0.15	0.06	0.04
Task-focused leadership behavior	0.68**	0.69**	0.65*	0.66*	0.74**	0.74**
Age		-0.01	-0.04	-0.04	-0.04	-0.04
Gender		0.10	0.11	0.12	0.14	0.20
Ethnicity		0.23*	0.26*	0.34*	0.31	0.24
Previous grade			0.00	0.00	0.00	0.00
General mental ability			0.00	0.00	0.00	0.00
Years of experience			0.04	0.03	0.04	0.04
Extraversion				-0.13	-0.11	-0.10
Agreeableness				0.07	0.08	0.10
Conscientiousness				0.07	0.09	0.09
Neuroticism				0.00	-0.01	-0.03
Openness to experience				0.01	0.01	0.00
Leadership style - relations					-0.07	-0.06
Leadership style - task					0.07	0.04
Leader role in other class					0.12	0.14
Gender diversity in team						-0.34
Ethnicity diversity in team						-0.19
Constant	-0.11	0.14	0.64	0.22	-0.10	0.23
Observations	104	100	83	83	76	76
R-squared	0.53	0.55	0.53	0.55	0.57	0.58

Note. \*  $p < 0.05$ , \*\*  $p < 0.01$ ; values are unstandardized regression coefficients

Table 11

*Results of Regression Analysis for the Moderation Effects of Consistency between actor's and others' perception on actor's Status/Power on the relationship between Status/Power and Leadership Emergence*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Status (a)	0.94	0.35	1.14	1.41	1.36	1.32
Power (b)	-1.62	-4.69	-12.96	-16.94	-19.68	-18.33
Consistency btw actor's and others' perception on actor's status (1)	-0.01	-0.04	-0.07	-0.15	-0.15	-0.15
Consistency btw actor's and others' perception on actor's power (2)	0.28**	0.30**	0.34**	0.42**	0.43**	0.42**
(a) X (1)	-0.56	-0.52	-1.17*	-0.68	-0.79	-0.73
(b) X (2)	9.93	12.65	16.31*	12.75	13.44	12.90
Age		-0.01	-0.07	-0.07	-0.03	-0.03
Gender		0.28	0.29	0.15	0.19	0.24
Ethnicity		0.39*	0.41	0.54*	0.46*	0.42
Previous grade			0.01	0.01	0.01	0.01
General mental ability			0.00	0.00	0.00	0.00
Years of experience			0.09	0.07	0.04	0.04
Extraversion				-0.09	-0.07	-0.08
Agreeableness				0.17	0.15	0.15
Conscientiousness				0.20	0.20	0.19
Neuroticism				0.18	0.19	0.18
Openness to experience				0.07	0.03	0.03
Leadership style - relations					0.04	0.04
Leadership style - task					0.13	0.11
Leader role in other class					0.30	0.31
Gender diversity in team						-0.27
Ethnicity diversity in team						-0.10
Constant	2.92**	2.96**	3.64	1.53	-0.27	0.05
Observations	92	89	75	75	75	75
R-squared	0.17	0.24	0.35	0.42	0.46	0.47

Note. \* p<0.05, \*\* p<0.01; values are unstandardized regression coefficients



Table 12

*Study 2 Descriptive Statistics, Reliability Coefficients, and Correlations for H13 - H18*

	<b>Variable</b>	<b>Mean</b>	<b>SD</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>1</b>	Process conflict	2.14	1.17	<i>n.a.</i>							
<b>2</b>	Relationship conflict	1.21	0.57	0.26*	<i>n.a.</i>						
<b>3</b>	Task conflict	1.45	0.90	0.33*	0.47*	<i>n.a.</i>					
<b>4</b>	Status conflict	1.22	0.62	0.36*	0.68*	0.37*	<i>n.a.</i>				
<b>5</b>	Power	0.01	0.01	0.04	0.20*	0.13*	0.21*	<i>n.a.</i>			
<b>6</b>	Status	0.17	0.10	-0.08	-0.03	0.10	-0.10	0.34*	<i>n.a.</i>		
<b>7</b>	Needs for power	3.49	0.75	-0.15*	-0.01	0.08	-0.15*	0.19*	0.43*	0.69	
<b>8</b>	Needs for status	4.39	0.51	-0.11*	-0.27*	-0.19	-0.22*	0.11*	0.35*	0.54*	0.77
<b>9</b>	Age	28.38	3.58	-0.09	0.01	-0.04*	-0.05	-0.01	-0.21	-0.12	-0.19*
<b>10</b>	Gender	0.30	0.46	0.04	0.16*	0.00	0.09*	0.28*	0.04*	0.01	-0.20*
<b>11</b>	Ethnicity	0.73	0.44	-0.20*	-0.32*	-0.19	-0.31*	0.03*	0.27*	0.25*	0.27*
<b>12</b>	General mental ability	675.83	51.60	0.05	0.02	0.08	0.06	-0.12	0.37*	0.04	0.06
<b>13</b>	Extraversion	3.36	0.74	-0.28*	-0.11	-0.10	-0.17*	0.24*	0.35*	0.30*	0.20*
<b>14</b>	Agreeableness	3.97	0.60	-0.10	-0.08	-0.09	-0.07	0.25*	0.06	0.06*	0.07*
<b>15</b>	Conscientiousness	3.74	0.67	-0.07*	-0.06	-0.24*	-0.11	0.15*	-0.08	-0.05	0.02
<b>16</b>	Neuroticism	2.55	0.78	0.08	-0.02	0.10	0.01	-0.04	-0.19	-0.12	-0.25*
<b>17</b>	Openness	3.91	0.65	-0.10	-0.21	-0.05	-0.13	0.08	-0.07	-0.06	-0.03
<b>18</b>	Gender homophily	0.57	0.49	0.06	-0.10*	0.07	-0.05	-0.16*	-0.04	0.08	0.00
<b>19</b>	Race homophily	0.63	0.48	-0.02	-0.11	-0.08	-0.12	-0.09	0.06*	0.14	0.18*
<b>20</b>	Age difference	0.00	5.24	-0.05	0.00	-0.01	-0.03	0.02	-0.17	-0.03	-0.08
<b>21</b>	Team psychological safety	4.17	0.54	-0.08*	-0.35*	-0.32*	-0.37*	-0.19*	0.00	0.07	0.13
<b>22</b>	Team communication	4.16	0.64	-0.03	-0.46*	-0.30*	-0.41*	-0.22*	-0.05*	0.03	0.22*
<b>23</b>	Team workload sharing	4.12	0.79	0.05	-0.13*	-0.38*	-0.17*	-0.04	-0.27*	-0.15	0.04
<b>24</b>	Team task conflict	1.85	0.55	0.16*	0.19*	0.21*	0.21*	0.01	-0.03	-0.01	-0.15*
<b>25</b>	Team relationship conflict	1.30	0.47	-0.01	0.42*	0.33*	0.47*	0.27*	0.12	-0.05	-0.17*
<b>26</b>	Team process conflict	1.26	0.43	0.07*	0.43*	0.49*	0.37*	0.14	0.15*	-0.03	-0.17*
<b>27</b>	Team status conflict	1.55	0.58	-0.06	0.41*	0.15*	0.43*	0.06	0.02	-0.10	-0.09

		<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>
<b>9</b>	Age	<i>n.a.</i>									
<b>10</b>	Gender	0.02	<i>n.a.</i>								
<b>11</b>	Ethnicity	0.12	0.04	<i>n.a.</i>							
<b>12</b>	General mental ability	-0.29*	-0.31*	-0.12	<i>n.a.</i>						
<b>13</b>	Extraversion	-0.16*	0.08	0.29*	0.09	0.76					
<b>14</b>	Agreeableness	-0.06	0.35*	-0.05	0.00	0.16*	0.74				
<b>15</b>	Conscientiousness	0.09	0.04	-0.09*	-0.29*	-0.05	0.02	0.67			
<b>16</b>	Neuroticism	-0.05	0.25*	-0.06	-0.09*	-0.04	0.21*	-0.27*	0.76		
<b>17</b>	Openness	0.08*	0.06	0.17	-0.18*	0.14*	0.12*	0.03	-0.05	0.72	
<b>18</b>	Gender homophily	0.04	-0.37*	0.00	0.17*	0.07	-0.14*	0.00	-0.09*	-0.03	<i>n.a.</i>
<b>19</b>	Race homophily	0.02	-0.09	0.41*	-0.09	0.10*	-0.17*	-0.13*	-0.03	0.09	0.09
<b>20</b>	Age difference	0.76*	0.00	0.09	-0.27*	-0.08	-0.06	0.08	-0.05	0.05	-0.02
<b>21</b>	Team psychological safety	-0.01	-0.08	0.36*	-0.07	0.06	0.13	0.06	-0.14*	0.12	0.05
<b>22</b>	Team communication	-0.10	-0.27*	0.21*	-0.01	0.00	0.14	0.09*	-0.05*	0.22	0.11*
<b>23</b>	Team workload sharing	0.10*	-0.05	-0.14	-0.17*	-0.14*	0.00	0.37*	-0.12*	-0.07	0.02
<b>24</b>	Team task conflict	-0.08	-0.12	-0.35*	0.01	-0.11	-0.03	-0.14*	0.10*	-0.11	0.07
<b>25</b>	Team relationship conflict	-0.10*	0.00	-0.13	0.00	0.08*	-0.04	-0.11*	-0.07	-0.05	-0.02
<b>26</b>	Team process conflict	-0.05	-0.06	-0.15*	0.13*	0.02	-0.07	-0.17*	-0.05	-0.06	0.03
<b>27</b>	Team status conflict	-0.07*	-0.06	-0.37*	0.05	0.00	0.00	0.01	-0.18	-0.23*	-0.06
		<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	
<b>19</b>	Race homophily	<i>n.a.</i>									
<b>20</b>	Age difference	-0.01	<i>n.a.</i>								
<b>21</b>	Team psychological safety	0.11	-0.01	<i>n.a.</i>							
<b>22</b>	Team communication	0.13	-0.08	0.72*	<i>n.a.</i>						
<b>23</b>	Team workload sharing	0.00	0.04	0.39*	0.46*	<i>n.a.</i>					
<b>24</b>	Team task conflict	-0.14	-0.07	-0.04*	-0.05*	-0.23*	<i>n.a.</i>				
<b>25</b>	Team relationship conflict	-0.05	-0.11*	-0.50*	-0.56*	-0.46*	0.24*	<i>n.a.</i>			
<b>26</b>	Team process conflict	-0.08*	-0.03	-0.42*	-0.35*	-0.47*	0.22*	0.64*	<i>n.a.</i>		
<b>27</b>	Team status conflict	-0.15	-0.06*	-0.39*	-0.33*	-0.11*	0.34*	0.50*	0.48*	<i>n.a.</i>	

Note. N = 414; \* p<0.05; coefficient alpha reliabilities are reported on the diagonal

Table 13-1  
*Results of Regression Analysis for the Effects of Status-Power inconsistency on Relationship conflict*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Power	6.49	6.67	13.49	12.44	2.29	1.00
Status	0.33	0.48	0.17	0.21	0.13	0.12
Power X Status	-45.16	-49.70	-43.14	-36.72	-38.13	-49.81
Age		0.01	0.01	0.02	0.02	0.01
Gender		0.27*	0.32**	0.29*	0.18	0.11
Ethnicity		-0.32*	-0.33**	-0.33**	-0.20*	-0.13
General mental ability		0.00	0.00	0.00	0.00	0.00
Extraversion			-0.03	-0.04	0.06	0.04
Agreeableness			-0.11	-0.12	-0.05	-0.02
Conscientiousness			-0.11	-0.10	-0.01	0.00
Neuroticism			-0.07	-0.06	-0.06	-0.02
Openness to experience			-0.15	-0.16	-0.13*	(0.07)
Observer's power	0.77	1.57	1.64	1.73	-0.22	-0.33
Observer's status	-0.05	-0.12	-0.13	-0.13	-0.07	-0.05
Gender homophily				-0.06	-0.06	-0.07
Race homophily				0.02	0.06	0.06
Age difference				-0.01	0.00	0.00
Process conflict					0.06*	0.06*
Task conflict					0.13**	0.12**
Status conflict					0.47**	0.42**
Team psychological safety						0.17
Team communication						-0.24*
Team workload sharing						0.08
Team task conflict						-0.01
Team relationship conflict						-0.05
Team process conflict						0.27*
Team status conflict						0.06
Constant	1.12**	0.49	2.65*	2.33	0.62	-0.02
Observations	365	298	298	287	287	287
Number of groups	21	21	21	21	21	21
Log likelihood	-191.47	-147.47	-143.88	-128.01	-79.93	-74.29

Note. \*  $p < 0.05$ , \*\*  $p < 0.01$ ; values are unstandardized regression coefficients

Table 13-2  
*Results of Regression Analysis for the Effects of Status-Power inconsistency on Process conflict*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Power	1.87	9.11	24.66	not converged	6.916	2.28
Status	-0.26	-0.25	0.70		(0.04)	0.04
Power X Status	14.16	11.75	0.78		(24.39)	61.44
Age		0.00	-0.01		-0.02	-0.03
Gender		0.15	0.30		0.08	0.18
Ethnicity		-0.55	-0.39		0.01	0.02
General mental ability		0.00	0.00		0.00	0.00
Extraversion			-0.55**		-0.40*	-0.27
Agreeableness			-0.21		-0.15	-0.11
Conscientiousness			-0.07		0.03	-0.06
Neuroticism			0.00		0.08	-0.09
Openness to experience			-0.05		0.06	-0.05
Observer's power	-1.57	-2.51	-2.78		-4.72	-4.78
Observer's status	-0.53	-0.40	-0.38		-0.28	-0.36
Gender homophily					-0.03	-0.03
Race homophily					0.00	0.01
Age difference					-0.01	-0.01
relationship conflict					0.40**	0.40**
Task conflict					0.21**	0.21**
Status conflict					0.24	0.40**
Team psychological safety						-0.40
Team communication						0.25
Team workload sharing						0.25
Team task conflict						0.43
Team relationship conflict						-0.32
Team process conflict						0.17
Team status conflict						-0.68*
Constant	2.28**	1.59	4.20		2.47	3.45
Observations	365	298	298		287	287
Number of groups	21	21	21		21	21
Log likelihood	-437.12	-351.68	-345.11		-317.27	-310.03

Note. \* p<0.05, \*\* p<0.01; values are unstandardized regression coefficients

Table 14-1

*Results of Regression Analysis for the Effects of Global status-Local status inconsistency on Relationship conflict*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
global status	0.90	1.26	1.27*	1.22	0.58	0.46
local status	-0.38	-0.41	-0.56	-0.49	-0.18	-0.02
global status X local status	-2.88	-4.76	-5.55	-4.98	-4.70*	-5.10*
Age		0.01	0.01	0.02	0.020*	0.01
Gender		0.25*	0.33**	0.29*	0.16	0.09
Ethnicity		-0.34**	-0.40**	-0.39**	-0.24*	-0.17
General mental ability		0.00	0.00	0.00	0.00	0.00
Extraversion			0.05	0.04	0.10	0.07
Agreeableness			-0.10	-0.11	-0.06	-0.02
Conscientiousness			-0.12	-0.11	-0.03	-0.02
Neuroticism			-0.11	-0.10	-0.09	-0.05
Openness to experience			-0.129	-0.14	-0.12	-0.057
Observer's power	0.71	1.49	1.48	1.58	-0.22	-0.24
Observer's status	-0.06	-0.12	-0.14	-0.13	-0.08	-0.07
Gender homophily				-0.06	-0.06	-0.06
Race homophily				0.02	0.06	0.06
Age difference				-0.01	0.00	0.00
Process conflict					0.05*	0.06*
Task conflict					0.13**	0.12**
Status conflict					0.46**	0.42**
Team psychological safety						0.14
Team communication						-0.24*
Team workload sharing						0.11
Team task conflict						0.01
Team relationship conflict						-0.08
Team process conflict						0.29*
Team status conflict						0.05
Constant	1.16**	0.38	2.48*	2.16	0.59	0.00
Observations	365	298	298	287	287	287
Number of groups	21	21	21	21	21	21
Log likelihood	-190.85	-145.81	-142.15	-126.77	-77.92	-72.25

Note. \*  $p < 0.05$ , \*\*  $p < 0.01$ ; values are unstandardized regression coefficients

Table 14-2  
*Results of Regression Analysis for the Effects of Global power-Local power inconsistency on Process conflict*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
global power	-11.48	-2.87	not converged	19.99	1.35	-1.15
local power	1.36	0.96		0.68	0.26	0.24
global power X local power	23.59	26.30		23.01	4.38	104.95
Age		0.00		0.01	-0.02	-0.03
Gender		0.16		0.32	0.08	0.19
Ethnicity		-0.57*		-0.35	0.00	0.02
General mental ability		0.00		0.00	0.00	0.00
Extraversion				-0.51**	-0.39*	-0.26
Agreeableness				-0.20	-0.14	-0.11
Conscientiousness				-0.05	0.04	-0.05
Neuroticism				-0.04	0.08	-0.09
Openness to experience				-0.06	0.06	-0.06
Observer's power	-1.77	-2.64		-3.24	-4.76	-4.82
Observer's status	-0.52	-0.39		-0.37	-0.28	-0.35
Gender homophily				-0.03	-0.03	-0.03
Race homophily				-0.03	0.00	0.01
Age difference				-0.01	-0.01	-0.01
Relationship conflict					0.40**	0.40**
Task conflict					0.21**	0.21**
Status conflict					0.24	0.40**
Team psychological safety						-0.41
Team communication						0.26
Team workload sharing						0.25
Team task conflict						0.44
Team relationship conflict						-0.32
Team process conflict						0.15
Team status conflict						-0.67*
Constant	2.25**	1.75		3.58	2.49	3.41
Observations	365	298		287	287	287
Number of groups	21	21		21	21	21
Log likelihood	-436.24	-351.35		-333.29	-317.3	-309.88

Note. \* p<0.05, \*\* p<0.01; values are unstandardized regression coefficients

Table 15-1

*Results of Regression Analysis for the Moderation Effects of Needs for status on the Relationship between Status-Power inconsistency and Relationship conflict*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Power	6.52	6.56	13.64	12.59	2.23	0.96
Status	0.29	0.49	0.18	0.23	0.14	0.12
Needs for status	0.01	0.01	0.01	0.01	0.01	0.01
Power X Status	-46.11	-51.04	-45.80	-39.80	-43.00	-53.33
Power X Needs for status	-5.72	-3.98	-4.92	-4.68	2.66	2.32
Status X Needs for status	0.11	-0.18	-0.20	-0.19	-0.31	-0.31
Power X Status X Needs for status	1.26	23.74	14.92	11.56	6.17	1.17
Age		0.01	0.01	0.02	0.02	0.01
Gender		0.26*	0.32**	0.28*	0.17	0.10
Ethnicity		-0.32*	-0.33**	-0.33**	-0.20	-0.12
General mental ability		0.00	0.00	0.00	0.00	0.00
Extraversion			-0.03	-0.04	0.06	0.04
Agreeableness			-0.12	-0.13	-0.06	-0.02
Conscientiousness			-0.11	-0.09	-0.01	0.00
Neuroticism			-0.07	-0.06	-0.06	-0.02
Openness to experience			-0.16	-0.16*	-0.13*	-0.07
Observer's power	0.73	1.72	1.83	2.04	0.02	-0.09
Observer's status	-0.05	-0.12	-0.14	-0.13	-0.08	-0.05
Gender homophily				-0.055	-0.06	-0.06
Race homophily				0.01	0.05	0.05
Age difference				-0.01	-0.01	-0.01
Process conflict					0.05*	0.06*
Task conflict					0.13**	0.12**
Status conflict					0.47**	0.42**
Team psychological safety						0.17
Team communication						-0.24*
Team workload sharing						0.09
Team task conflict						0.00
Team relationship conflict						-0.06
Team process conflict						0.27*
Team status conflict						0.06
Constant	1.08**	0.45	2.63*	2.35	0.54	-0.11
Observations	353	289	289	278	278	278
Number of groups	21	21	21	21	21	21
Log likelihood	-191.71	-147.59	-143.72	-128.25	-81.84	-76.32

Note. \*  $p < 0.05$ , \*\*  $p < 0.01$ ; values are unstandardized regression coefficients

Table 15-2

*Results of Regression Analysis for the Moderation Effects of Needs for status on the Relationship between Global status-Local status inconsistency and Relationship conflict*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Global status	0.87	1.30*	1.32*	1.29*	0.64	0.56
Local status	-0.38	-0.42	-0.55	-0.47	-0.19	-0.04
Needs for status	0.00	-0.01	-0.01	-0.01	-0.02	-0.03
Global status X Local status	-2.79	-4.92	-5.66	-5.20	-4.94*	-5.36*
Global status X Needs for status	0.10	-0.50	-0.59	-0.67	-0.88	-0.90*
Local status X Needs for status	-0.10	-0.07	-0.04	0.02	0.10	0.10
Global status X Local status X Needs for status	1.14	2.84	3.00	3.17	4.29*	4.35*
Age		0.01	0.01	0.02	0.021*	0.01
Gender		0.25*	0.32**	0.29*	0.16	0.08
Ethnicity		-0.34**	-0.40**	-0.39**	-0.25*	-0.17
General mental ability		0.00	0.00	0.00	0.00	0.00
Extraversion			0.05	0.03	0.09	0.07
Agreeableness			-0.10	-0.12	-0.07	-0.03
Conscientiousness			-0.12	-0.10	-0.02	-0.02
Neuroticism			-0.111	-0.094	-0.089	-0.05
Openness to experience			-0.13	-0.14	-0.13*	-0.06
Observer's power	0.67	1.65	1.67	1.89	-0.11	-0.09
Observer's status	-0.05	-0.14	-0.16	-0.15	-0.10	-0.08
Gender homophily				-0.06	-0.06	-0.06
Race homophily				0.02	0.06	0.06
Age difference				-0.01	0.00	0.00
Process conflict					0.05	0.05*
Task conflict					0.13**	0.13**
Status conflict					0.46**	0.42**
Team psychological safety						0.15
Team communication						-0.26*
Team workload sharing						0.11
Team task conflict						0.02
Team relationship conflict						-0.11
Team process conflict						0.27*
Team status conflict						0.05
Constant	1.16**	0.35	2.51*	2.22	0.69	0.16
Observations	353	289	289	278	278	278
Number of groups	21	21	21	21	21	21
Log likelihood	-191.39	-145.54	-141.68	-126.57	-77.75	-72.11

*Note.* \*  $p < 0.05$ , \*\*  $p < 0.01$ ; values are unstandardized regression coefficients



Table 16-1

*Results of Regression Analysis for the Moderation Effects of Needs for power on the Relationship between Status-Power inconsistency and Process conflict*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Power	3.10	7.80	23.69	23.43	10.21	5.15
Status	-0.18	-0.07	0.99	1.05	0.22	0.20
Needs for power	0.03	0.00	0.00	0.02	0.01	0.01
Power X Status	52.23	70.35	50.97	46.69	27.24	104.22
Power X Needs for power	-4.34	-7.69	-8.86	-9.71	-8.64	-9.52
Status X Needs for power	1.70**	1.77**	1.81**	1.92**	1.57**	1.54**
Power X Status X Needs for power	165.43**	217.73*	219.04*	221.80*	189.92*	180.94*
Age		0.00	-0.01	0.01	-0.02	-0.02
Gender		0.14	0.29	0.29	0.09	0.20
Ethnicity		-0.56	-0.40	-0.40	-0.04	-0.04
General mental ability		0.00	0.00	0.00	0.00	0.00
Extraversion			-0.57**	-0.57**	-0.45**	-0.32*
Agreeableness			-0.21	-0.25	-0.18	-0.15
Conscientiousness			-0.12	-0.13	-0.04	-0.11
Neuroticism			0.00	-0.01	0.08	-0.08
Openness to experience			0.01	0.03	0.11	-0.02
Observer's power	-4.83	-6.38	-6.71	-8.36	-8.58	-8.34
Observer's status	-0.55	-0.35	-0.36	-0.34	-0.24	-0.31
Gender homophily				-0.07	-0.06	-0.06
Race homophily				-0.04	-0.01	-0.01
Age difference				-0.02	-0.01	-0.01
Relationship conflict					0.37**	0.38**
Task conflict					0.18*	0.19*
Status conflict					0.16	0.32*
Team psychological safety						-0.42
Team communication						0.30
Team workload sharing						0.22
Team task conflict						0.40
Team relationship conflict						-0.24
Team process conflict						0.16
Team status conflict						-0.66*
Constant	2.17**	1.89	4.70	4.11	2.99	3.86
Observations	353	289	289	278	278	278
Number of groups	21	21	21	21	21	21
Log likelihood	-415.79	-334.92	-327.7	-315.38	-303.07	-296.62

Note. \* p<0.05, \*\* p<0.01; values are unstandardized regression coefficients; standard errors in parentheses

Table 16-2

*Results of Regression Analysis for the Moderation Effects of Needs for power on the Relationship between Global power-Local power inconsistency and Process conflict*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Global power	-6.58	2.87	not converged	not converged	not converged	not converged
Local power	1.68	1.20				
Needs for power	0.07	0.05				
Global power X Local power	-61.52	-71.59				
Global power X Needs for power	4.43	5.85				
Local power X Needs for power	0.05	-0.41				
Global power X Local power X Needs for power	25.10	70.59				
Age		0.00				
Gender		0.18				
Ethnicity		-0.54*				
General mental ability		0.00				
Extraversion						
Agreeableness						
Conscientiousness						
Neuroticism						
Openness to experience						
Observer's power	-2.82	-3.79				
Observer's status	-0.65	-0.50				
Gender homophily						
Race homophily						
Age difference						
Relationship conflict						
Task conflict						
Status conflict						
Team psychological safety						
Team communication						
Team workload sharing						
Team task conflict						
Team relationship conflict						
Team process conflict						
Team status conflict						
Constant	2.03**	1.44				
Observations	353	289				
Number of groups	21	21				
Log likelihood	-424.11	-342.86				

Note. \*  $p < 0.05$ , \*\*  $p < 0.01$ ; values are unstandardized regression coefficients; standard errors in parentheses

Appendix 1  
Status single-item and multi-item

Item		Est.	S.E.	z-value	Corr.
<b><i>Respect</i></b>					
Single-item	I respect, admire, or look up to [colleague A].	0.83	0.02	34.23	0.81 (with 8-item)
Multi-item (Respect)	I believe that [colleague A] has a good reputation in organization	0.77	0.03	24.11	0.75 (with 5-item)
	I appreciate [colleague A]'s unique attributes (e.g. abilities, attractiveness, intelligence or Talent)	0.83	0.02	33.22	
	I value [colleague A]'s personal competence	0.73	0.04	20.48	
	I believe that [colleague A] is respected person in organization	0.78	0.03	24.78	
	I respect [colleague A]'s values	0.85	0.02	39.59	
Multi-item (admiration)	I hold [colleague A] in high respect	0.91	0.02	59.05	0.80 (with 3-item)
	I have great esteem for [colleague A]	0.90	0.02	53.23	
	I admire [colleague A]	0.89	0.02	50.22	

N = 187

$\chi^2$  (d.f.)=189.62 (27);  $p < 0.05$

Appendix 2  
*Results of Regression Analysis for the Effects of Power and Status on Leadership  
Emergence with Alternative Independent Variable*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Power	0.48 (0.81)	0.97 (0.68)	0.97 (0.68)	0.92 (0.68)	0.74 (0.76)	0.73 (0.75)
Status	4.35** (0.50)	2.06** (0.53)	2.06** (0.53)	2.38** (0.59)	2.21** (0.69)	2.26** (0.69)
Gender		-0.01 (0.05)	-0.01 (0.05)	-0.01 (0.06)	0.04 (0.08)	0.05 (0.08)
Org rank		0.19** (0.03)	0.19** (0.03)	0.18** (0.04)	0.19** (0.05)	0.19** (0.05)
Education		0.08 (0.07)	0.08 (0.07)	0.07 (0.07)	0.08 (0.08)	0.06 (0.08)
On leave			0.00 (0.11)	-0.08 (0.12)	-0.10 (0.13)	-0.13 (0.14)
Openness to experience					0.07 (0.05)	0.07 (0.05)
Conscientiousness					0.01 (0.04)	0.02 (0.04)
Extraversion					0.00 (0.04)	0.01 (0.04)
Agreeableness					-0.04 (0.05)	-0.06 (0.05)
Neuroticism					-0.07 (0.05)	-0.08 (0.05)
Number of project involved				-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
Average number of available project				-0.013 (0.013)		-0.03 (0.02)
Constant	0.18** (0.03)	-0.53** (0.14)	-0.53** (0.14)	-0.143 (0.32)	-0.386 (0.34)	0.21 (0.53)
Observations	101	101	101	101	72	72
R-squared	0.45	0.63	0.63	0.64	0.65	0.66

*Note.* \* p<0.05, \*\* p<0.01; values are unstandardized regression coefficients; standard errors in parentheses

### Appendix 3

#### *Results of Regression Analysis for the Effects of Power and Status on Leadership Emergence by Project Uncertainty with Alternative Independent Variable*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Power	4.28 (2.31)	3.67 (2.29)	3.76 (2.31)	3.78 (2.34)	3.30 (2.47)	3.65 (2.33)
Status	3.41* (1.55)	5.00** (1.84)	4.99** (1.85)	4.89* (2.08)	6.02* (2.31)	5.39* (2.19)
Gender		-0.10 (0.24)	-0.08 (0.24)	-0.07 (0.25)	-0.23 (0.33)	-0.24 (0.31)
Org rank		-0.06 (0.15)	-0.05 (0.15)	-0.04 (0.16)	-0.17 (0.19)	-0.12 (0.18)
Education		-0.51* (0.25)	-0.53* (0.25)	-0.53* (0.26)	-0.69* (0.29)	-0.52 (0.28)
On leave			0.34 (0.55)	0.36 (0.59)	0.30 (0.64)	0.36 (0.60)
Openness to experience					0.06 (0.20)	0.19 (0.19)
Conscientiousness					0.16 (0.16)	0.15 (0.15)
Extraversion					-0.02 (0.16)	-0.09 (0.15)
Agreeableness					0.14 (0.18)	0.19 (0.17)
Neuroticism					0.06 (0.21)	0.07 (0.20)
Number of project involved				0.00 (0.03)	0.01 (0.03)	-0.01 (0.03)
Average number of available project						0.25* (0.10)
Constant	1.89** (0.12)	3.19** (0.58)	3.18** (0.58)	3.13** (0.76)	2.54 (1.32)	0.03 (1.63)
Observations	64	64	64	64	50	50
R-squared	0.14	0.22	0.23	0.23	0.35	0.44

*Note.* \*  $p < 0.05$ , \*\*  $p < 0.01$ ; values are unstandardized regression coefficients; standard errors in parentheses

# Appendix 4

## *Results of Regression Analysis for the Effects of Power and Status on Leadership Emergence by Project Uncertainty*

	DV: leadership emergence in high uncertainty projects						DV: leadership emergence in low uncertainty projects					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
Power	3.34 (2.66)	4.53 (2.47)	4.64 (2.48)	4.63 (2.50)	3.70 (3.17)	3.86 (3.18)	3.16 (2.86)	4.91* (2.33)	5.01* (2.36)	4.90* (2.37)	3.26 (2.83)	3.24 (2.77)
Status	4.15** (0.58)	2.28** (0.66)	2.27** (0.66)	2.28** (0.73)	2.69** (0.92)	2.60** (0.93)	3.53** (0.62)	0.64 (0.62)	0.64 (0.63)	0.86 (0.69)	0.89 (0.82)	0.92 (0.80)
Gender		-0.01 (0.06)	0.00 (0.07)	0.00 (0.07)	0.04 (0.10)	0.02 (0.10)		0.00 (0.06)	0.00 (0.06)	0.00 (0.06)	0.06 (0.09)	0.08 (0.09)
Org rank		0.15** (0.04)	0.15** (0.04)	0.15** (0.04)	0.13* (0.06)	0.13* (0.06)		0.24** (0.04)	0.24** (0.04)	0.23** (0.04)	0.24** (0.05)	0.26** (0.05)
Education		0.08 (0.08)	0.08 (0.08)	0.08 (0.09)	0.01 (0.11)	0.03 (0.11)		0.06 (0.08)	0.06 (0.08)	0.05 (0.08)	0.08 (0.10)	0.08 (0.09)
On leave			0.15 (0.19)	0.14 (0.20)	0.16 (0.24)	0.15 (0.24)			0.04 (0.12)	0.00 (0.13)	0.07 (0.16)	0.10 (0.15)
Openness to experience					0.07 (0.06)	0.08 (0.06)					0.06 (0.05)	0.08 (0.05)
Conscientiousness					0.02 (0.05)	0.02 (0.06)					0.00 (0.05)	0.01 (0.05)
Extraversion					0.00 (0.05)	-0.01 (0.05)					-0.01 (0.04)	0.00 (0.04)
Agreeableness					-0.02 (0.06)	-0.01 (0.06)					-0.01 (0.05)	-0.04 (0.05)
Neuroticism					-0.02 (0.07)	-0.02 (0.07)					-0.05 (0.06)	-0.07 (0.06)
Number of project involved				0.00 (0.01)	0.00 (0.01)	0.00 (0.01)				-0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
Average number of available project						0.04 (0.04)						-0.05 (0.03)
Constant	0.11** (0.04)	-0.49** (0.17)	-0.50** (0.17)	-0.50* (0.22)	-0.47 (0.44)	-0.80 (0.58)	0.22** (0.04)	-0.62** (0.15)	-0.62** (0.16)	-0.53** (0.20)	-0.55 (0.38)	0.14 (0.53)

Observations	93	93	93	93	65	65	100	100	100	100	72	72
R-squared	0.43	0.55	0.55	0.55	0.51	0.52	0.31	0.57	0.58	0.58	0.58	0.60

*Note.* \*  $p < 0.05$ , \*\*  $p < 0.01$ ; values are unstandardized regression coefficients; standard errors in parentheses

## Appendix 5. Study 1 Surveys

### Individual characteristics, Social networks (to the consultants)

Construct	Item	Scale	Source
	Please indicate how accurately each of the following statements describe you from a scale of very inaccurate to very accurate		
extraversion	I am the life of the party I don't talk a lot I talk to a lot of different people at parties I keep in the background	5-point scale: 1 = "Not at all", 2 = "Slightly", 3 = "Moderately", 4 = "Very", 5 = "To a great extent"	Donnellan, M.B., Oswald, F.L., Baird, B.M., & Lucas, R.E. (2006)
agreeableness	I sympathize with others' feelings I am not interested in other people's problems I feel others' emotions I am not really interested in others		
conscientiousness	I get chores done right away I often forget to put things back in their proper place I like order I make a mess of things		
neuroticism	I have frequent mood swings I am relaxed most of the time I get upset easily I seldom feel blue		
openness to experience	I have a vivid imagination I am not interested in abstract ideas I have difficulty understanding abstract ideas		



	I do not have a good imagination We interact with many people in the workplace.		
Communication Network	Please check below the names of people in this organization with whom you COMMUNICATE for job-related or firm-related information.	0 if not tied, and 1 if tied	Coleman, Katz, & Menzel (1957); Mehra, Kilduff, & Brass (2001); Rogers (1979)
Advice Network	Please check below the names of people in this organization who provide you critical ADVICE or HELP about complex problems posed by your work.		Ibarra (1992); Ibarra (1993)
Respect Network	Please check below the names of people in this organization whom you respect, admire or look up to.		Knoke & Kuklinski (1982); Wasserman & Faust (1994)

Task Uncertainty (to two senior managers)

Construct	Item	Scale	Source
Task Uncertainty	Here are the definitions of task uncertainty: a lack of predictability associated with inputs, processes, and outputs of the broader technical system within which the work is performed. Please rate task uncertainty of each project	5-point scale: 1 = “Very low”, 2 = “Low”, 3 = “Moderately”, 4 = “High”, 5 = “Very high”	

\* All other variables are obtained from the company’s HR Archival database.

## Appendix 6. mTturk Survey

### Task Uncertainty

	Item	Scale	Source
A single item	Here are the definitions of task uncertainty: a lack of predictability associated with inputs, processes, and outputs of the broader technical system within which the work is performed. Please rate task uncertainty of your current work	5-point scale: 1 = "Very low", 2 = "Low", 3 = "Moderately", 4 = "High", 5 = "Very high"	Griffin, Neal, & Parker (2007); Wall, Cordery, & Clegg, (2001)
Multi-item scale that previously used	My work has a range of appropriate responses My work takes long time to complete My work assesses a range of knowledge or skills My work provides opportunity for team member to demonstrate higher level of understanding My work has a lack of predictability of inputs, processes, and outputs when the work is performed My work has high probability that a task may fail and require re-work	5-point scale: 1 = "Not at all", 2 = "Slightly", 3 = "Moderately", 4 = "Very", 5 = "To a great extent"	Modified from Baldwin, Ford, & Blume, (2009); Blume, Ford, Baldwin, & Huang, (2010); Salas, Milham, & Bowers, 2003; Yelon & Ford, (1999)

### Status

	Item	Scale	Source
A single item for network survey	I respect, admire, or look up to [colleague A]	5-point scale: 1 = "Not at all", 2 =	

Respect Multi-item scale	I believe that [colleague A] has a good reputation in organization I appreciate [colleague A]'s unique attributes (e.g. abilities, attractiveness, intelligence or talent) I value [colleague A]'s personal competence I believe that [colleague A] is respected person in organization I respect [colleague A]'s values	"Slightly", 3 = "Moderately", 4 = "Very", 5 = "To a great extent"	Tyler & Blader (2002)
Admiration Multi-item scale	I hold [colleague A] in high respect I have great esteem for [colleague A] I admire [colleague A]		Conger, Kanungo, & Menon (2000)

#### Needs for Power / Status

	Item	Scale	Source
Needs for status	I want people to look up to me I want to have good reputation with people I want people to regard me as an important person	5-point scale: 1 = "Very low", 2 = "Low", 3 = "Moderately", 4 = "High", 5 = "Very high"	Griffin, Neal, & Parker (2007); Wall, Cordery, & Clegg, (2001)
Needs for power	I want to control resources or other people. I want people think I am an influential person I want to take a high position in a group or organization	5-point scale: 1 = "Not at all", 2 = "Slightly", 3 = "Moderately", 4 =	Modified from Baldwin, Ford, & Blume, (2009); Blume, Ford, Baldwin, & Huang,

		"Very", 5 = "To a great extent"	(2010); Salas, Milham, & Bowers, 2003; Yelon & Ford, (1999)
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#### Process Conflict

	Item	Scale	Source
A single item	At times [team member A] and I have disagreements about assignments of duties and resources (i.e., about the optimal amount of time to spend on different parts of teamwork, the optimal amount of time to spend in meetings, and who should do what)	5-point scale: 1 = "Not at all", 2 = "Slightly", 3 = "Moderately", 4 = "Very", 5 = "To a great extent"	
Multi-item scale that previously used	How frequently do your team members disagree about the optimal amount of time to spend on different parts of teamwork? How frequently do your team members disagree about the optimal amount of time to spend in meetings? How often do members of your team disagree about who should do what?	5-point scale: 1 = "Never", 2 = "Sometimes", 3 = "Often", 4 = "Most of the time", 5 = "Always"	Behfar et al. (2010)

## Appendix 7. Study 2 Surveys

### Time 1 Survey

Construct	Items	Scale	Source
	Please indicate how accurately each of the following statements describe you.		
Extraversion	I am the life of the party. I don't talk a lot. I talk to a lot of different people at parties. I keep in the background.	1 "Does not describe me at all," 2 "Does not describe me,"	Donnellan, Oswald, Baird, & Lucas, (2006)
Agreeableness	I sympathize with others' feelings. I am not interested in other people's problems. I feel others' emotions. I am not really interested in others.	3 "Describes me somewhat," 4 "Describes me well,"	
Conscientiousness	I get chores done right away. I often forget to put things back in their proper place. I like order. I make a mess of things.	5 "Describes me very well."	
Neuroticism	I have frequent mood swings. I am relaxed most of the time. I get upset easily. I seldom feel blue.		
Openness to experience	I have a vivid imagination. I am not interested in abstract ideas. I have difficulty understanding abstract ideas. I do not have a good imagination.		

Needs for power	I want to control resources or other people. I want people to think I am influential. I want to take a high position in a group or organization.		Created based on Winter & Stewart, (1983) and Stahl, Grigsby, & Gulati (1985)
Needs for status	I want people to look up to me. I want to have good reputation with people. I want people to regard me as a respected person.		Modified from Nieboer, Lindenberg, Boomsma, & Van Bruggen (2005)
Leadership style – concern for task	I would decide what shall be done and how it shall be done. I would assign group members to particular tasks. I would encourage the use of uniform procedures. I would ask that group members follow standard rules and regulations. I would schedule the work to be done.		Modified from Pfeffer & Jones (1974)
Leadership style – concern for people	I would trust the group members to exercise good judgment. I would permit the members to use their own judgment in solving problems. I would allow members freedom in their work. I would let the members do their work the way they think best. I would allow the group a high degree of initiative.		
Communication Network	Please check below the names of your cohort classmates in this MBA program with whom you COMMUNICATE for class-, school-, or job searching-related information.	1 if yes, otherwise 0	Coleman, Katz, & Menzel (1957); Mehra, Kilduff, &

			Brass (2001); Rogers (1979)
	How often do you communicate with them?	1 "Never", 2 "Sometimes", 3 "About half the time", 4 "Most of the time", 5 "Always"	
Respect Network	Please check below the names of your cohort classmates whom you RESPECT, ADMIRE, or LOOK UP TO, that is, people who have a good reputation for his/her competence, abilities, talent, or value.	1 if yes, otherwise 0	Knoke & Kuklinski (1982); Wasserman & Faust (1994)
	How much do you respect, admire, look up to them?	1 "Not at all", 2 "A little", 3 "Moderately", 4 "A lot", 5 "A great deal"	
Advice Network	Please check below the names of your cohort classmates who provide you critical ADVICE or HELP about complex problems posed by your class work.	1 if yes, otherwise 0	Ibarra, 1992; Ibarra, 1993
Friendship Network	Please check below the names of your cohort classmates whom you consider to be FRIENDS, that is, people whom you might choose to see socially outside of work or when you are not working together.	1 if yes, otherwise 0	Ibarra, 1992; Ibarra, 1993

Leadership in other classes	Are you playing a leadership role in classes other than this "Leading others" class?	1 if yes, otherwise 0	
GMAT score	What total score did you get from GMAT?		

#### Time 2 Survey

Construct	Item	Scale	Source
(Team task) self-efficacy	<p>I can manage to solve problems in my team if I try hard enough.</p> <p>It is easy for me to stick to my aims and accomplish my goals in my team.</p> <p>I am confident that I could deal efficiently with unexpected events in team activities.</p> <p>Thanks to my resourcefulness, I know how to handle unforeseen situations in team activities.</p> <p>I can solve most problems in my team if I invest the necessary effort.</p> <p>I can remain calm when facing difficulties during team activities because I can rely on my coping abilities.</p> <p>When I am confronted with a problem in my team, I can usually find several solutions.</p> <p>If I am in trouble during team activities, I can usually think of a solution.</p> <p>I can usually handle whatever comes my way during team activities.</p>	<p>1 "Does not describe me at all," 2 "Does not describe me,"</p> <p>3 "Describes me somewhat,"</p> <p>4 "Describes me well,"</p> <p>5 "Describes me very well."</p>	Modified from Schwarzer & Jerusalem (1995)



Leadership expectation	To what extent do you expect [team member A] to perform relations-focused leadership behaviors, that is providing support/consideration or fostering development and mentoring for team members?	1 "Not at all", 2 "A little", 3 "Moderately", 4 "A lot", 5 "A great deal"	
Perception on [team members'] power	To what extent does [team member A] have power?		Anicich et al. (2015)
Perception on [team members'] status	To what extent does [team member A] have status?		
	To what extent does [team member A] perform the following behaviors?		
task-focused leadership behaviors	Facilitating team planning and organizing (including the team's setting of goals, deciding how the team should go about the simulation, organizing the team's around a plan, etc.) Aiding team problem solving (including determining best course of action, quickly diagnosing problems and finding solutions, communicating well, using the combined expertise of the team adapt, etc.)	1 "Not at all", 2 "A little", 3 "Moderately", 4 "A lot", 5 "A great deal"	Hiller et al. (2006).
relations-focused leadership behaviors	Providing support and consideration (including providing support to team members who need help, showing patience toward team members, and fostering a cohesive team atmosphere, maintaining positive attitude, etc.).		

	Fostering development and mentoring (including helping to develop each other's skills, staying motivated even when things are challenging, showing poor performers how to improve, etc.)		
Task Conflict	At times [colleague A] and I expressed different ideas or opinions about the work being done in our team (i.e., we had different viewpoints or perspectives about how the task should be done).	1 "Very inaccurate", 2 "Slightly inaccurate", 3 "Neither accurate nor inaccurate", 4 "Slightly accurate", 5 "Very accurate"	Shah, Park, & Jones (Working paper)
Relationship Conflict	At times [colleague A] and I had difficulty getting along (i.e., our personalities clashed or there was friction or emotional conflict when we interacted).		
Process Conflict - logistics	At times [colleague A] and I have disagreements about how to distribute work to the team members and how to handle work flow (i.e., about the optimal amount of time to spend on different parts of teamwork, the optimal amount of time to spend in meetings, and who should do what).		Behfar et al. (2010)
Process Conflict - contribution	At times colleague A and I had disagreements about the contribution of colleague A or me to the team, such as tension caused by [colleague A] or me not performing as well as expected, not completing assignment(s) on time, or arriving late to team meetings.		
Status Conflict	At times [colleague A] and I have disputes over our relative status positions in our team (i.e., conflicts		Bendersky & Hays (2015)

	due to trying to assert dominance, influence, and value of each other's contributions in team activities).		
	Please indicate how accurately each of the following statements describe your team in MBA 6110 Leading Others class.		
Task Conflict (team)	<p>How much conflict of ideas is there in your work group?</p> <p>How frequently do you have disagreements within your work group about the task of the project you are working on?</p> <p>How often do people in your work group have conflicting opinions about the project you are working on?</p>	<p>1 "Does not describe my team at all,"</p> <p>2 "Does not describe my team,"</p> <p>3 "Describes my team somewhat,"</p> <p>4 "Describes my team well,"</p> <p>5 "Describes my team very well."</p>	Jehn and Mannix (2001)
Relationship Conflict (team)	<p>How much relationship tension is there in your work group?</p> <p>How often do people get angry while working in your group?</p> <p>How much emotional conflict is there in your work group?</p>		Jehn and Mannix (2001)
Process Conflict – logistics (team)	<p>How often are there disagreements about who should do what in your work group?</p> <p>How much conflict is there in your group about task responsibilities?</p> <p>How often do you disagree about resource allocation in your work group?</p>		Jehn and Mannix (2001)

Status Conflict (team)	<p>My team members frequently took sides (i.e., formed coalitions) during conflicts.</p> <p>My team members experienced conflicts due to members trying to assert their dominance.</p> <p>My team members competed for influence.</p> <p>My team members disagreed about the relative value of members' contributions.</p>	Bendersky & Hays (2015)
Psychological safety	<p>Members of this team are able to bring up problems and tough issues.</p> <p>It is safe to take a risk on this team.</p> <p>It is difficult to ask other members of this team for help.</p> <p>If you make a mistake on this team, it is often held against you.</p> <p>Working with members of this team, my unique skills and talents are value.</p> <p>No one on this team would deliberately act in a way that undermines my efforts.</p> <p>People on this team sometimes reject others for being different.</p>	Edmondson (1999)
Communication	<p>We listen carefully to each other's opinion.</p> <p>In our group, team members engage in open communication.</p> <p>All views are listened to, even if they are in the minority.</p>	

	Members of my team are very willing to share information with each other about the team project.		
Workload sharing	Everyone on my team does their fair share of the work. No one in my team depends on the other team members to do the work for them. Nearly all the members on my team contribute equally to the work.		Campion et al. (1993)

#### Time 3 Survey

Construct	Item	Scale	Source
	To what extent does [team member A] perform the following behaviors?		
task-focused leadership behaviors	Facilitating team planning and organizing (including the team's setting of goals, deciding how the team should go about the simulation, organizing the team's around a plan, etc.) Aiding team problem solving (including determining best course of action, quickly diagnosing problems and finding solutions, communicating well, using the combined expertise of the team adapt, etc.)	1 "Not at all", 2 "A little", 3 "Moderately", 4 "A lot", 5 "A great deal"	Hiller et al. (2006).
relations-focused leadership behaviors	Providing support and consideration (including providing support to team members who need help, showing patience toward team members, and fostering a cohesive team atmosphere, maintaining positive attitude, etc.).		

	Fostering development and mentoring (including helping to develop each other's skills, staying motivated even when things are challenging, showing poor performers how to improve, etc.)		
leadership emergence	To what degree does your team rely on [team member A] for leadership?		Zhang et al. (2012)
Task Conflict	At times [colleague A] and I expressed different ideas or opinions about the work being done in our team (i.e., we had different viewpoints or perspectives about how the task should be done).	1 "Very inaccurate", 2 "Slightly inaccurate", 3 "Neither accurate nor inaccurate", 4 "Slightly accurate", 5 "Very accurate"	Shah, Park, & Jones (Working paper)
Relationship Conflict	At times [colleague A] and I had difficulty getting along (i.e., our personalities clashed or there was friction or emotional conflict when we interacted).		
Process Conflict	At times [colleague A] and I have disagreements about how to distribute work to the team members and how to handle work flow (i.e., about the optimal amount of time to spend on different parts of teamwork, the optimal amount of time to spend in meetings, and who should do what).		Behfar et al. (2010)
Process Conflict - contribution	At times colleague A and I had disagreements about the contribution of colleague A or me to the team, such as tension caused by [colleague A] or me not performing as well as expected, not completing assignment(s) on time, or arriving late to team meetings.		
Status Conflict	At times [colleague A] and I have disputes over our relative status positions in our team (i.e., conflicts due to trying to		Bendersky & Hays (2015)

	assert dominance, influence, and value of each other's contributions in team activities).		
	Please indicate how accurately each of the following statements describe your team in MBA 6110 Leading Others class.		
Task Conflict (team)	How much conflict of ideas is there in your work group? How frequently do you have disagreements within your work group about the task of the project you are working on? How often do people in your work group have conflicting opinions about the project you are working on?	1 "Does not describe my team at all," 2 "Does not describe my team," 3 "Describes my team somewhat," 4 "Describes my team well," 5 "Describes my team very well."	Jehn and Mannix (2001)
Relationship Conflict (team)	How much relationship tension is there in your work group? How often do people get angry while working in your group? How much emotional conflict is there in your work group?		Jehn and Mannix (2001)
Process Conflict (team)	How often are there disagreements about who should do what in your work group? How much conflict is there in your group about task responsibilities? How often do you disagree about resource allocation in your work group?		Jehn and Mannix (2001)

Status Conflict (team)	<p>My team members frequently took sides (i.e., formed coalitions) during conflicts.</p> <p>My team members experienced conflicts due to members trying to assert their dominance.</p> <p>My team members competed for influence.</p> <p>My team members disagreed about the relative value of members' contributions.</p>	Bendersky & Hays (2015)
Psychological safety	<p>Members of this team are able to bring up problems and tough issues.</p> <p>It is safe to take a risk on this team.</p> <p>It is difficult to ask other members of this team for help.</p> <p>If you make a mistake on this team, it is often held against you.</p> <p>Working with members of this team, my unique skills and talents are value.</p> <p>No one on this team would deliberately act in a way that undermines my efforts.</p> <p>People on this team sometimes reject others for being different.</p>	Edmondson (1999)
Communication in team	<p>We listen carefully to each other's opinion.</p> <p>In our group, team members engage in open communication.</p> <p>All views are listened to, even if they are in the minority.</p>	



	Members of my team are very willing to share information with each other about the team project.		
Workload sharing	<p>Everyone on my team does their fair share of the work.</p> <p>No one in my team depends on the other team members to do the work for them.</p> <p>Nearly all the members on my team contribute equally to the work.</p>		Campion et al. (1993)

Figure 1. Status, power, and leadership emergence model

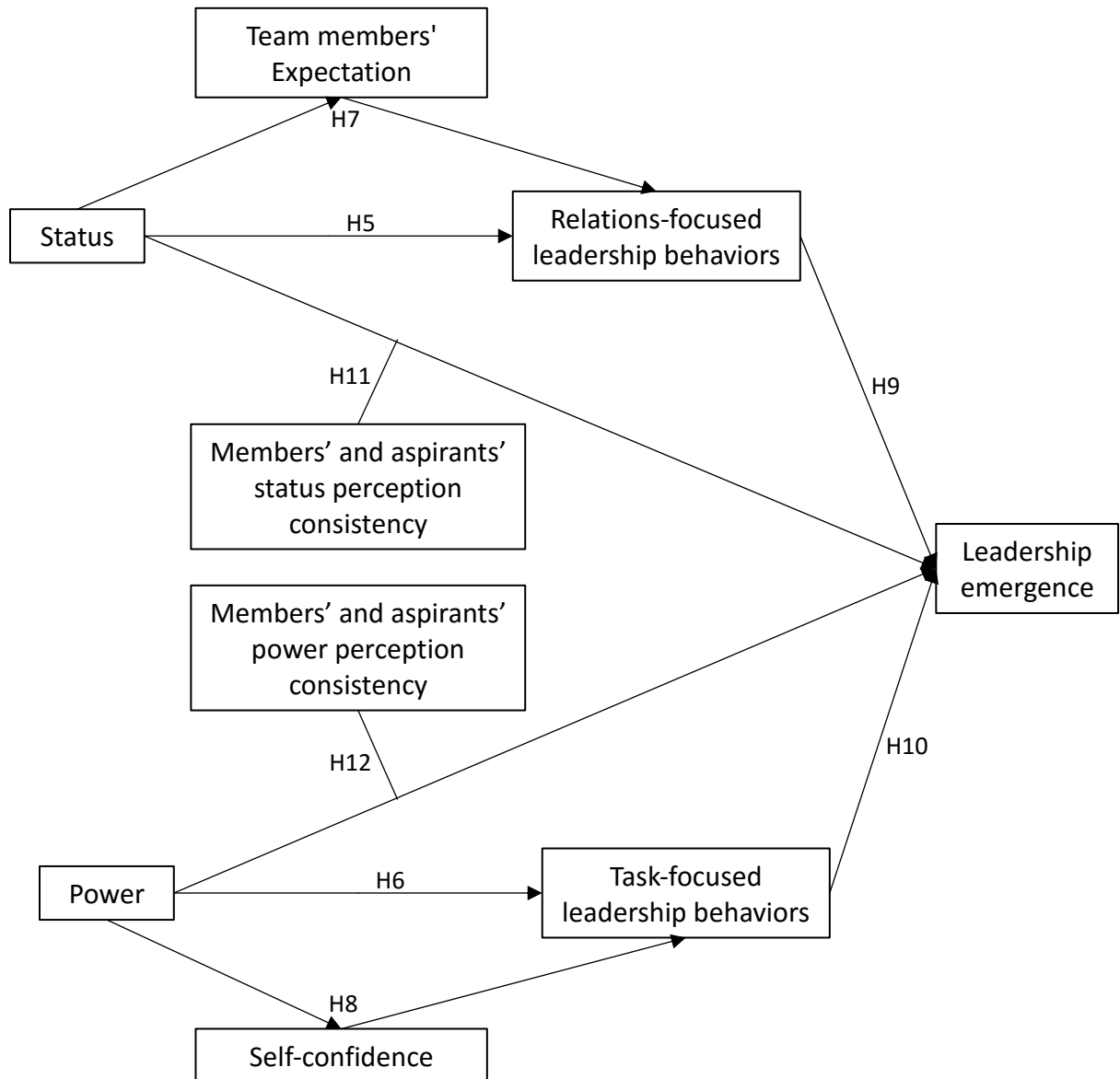


Figure 2. Status, power, and conflict model

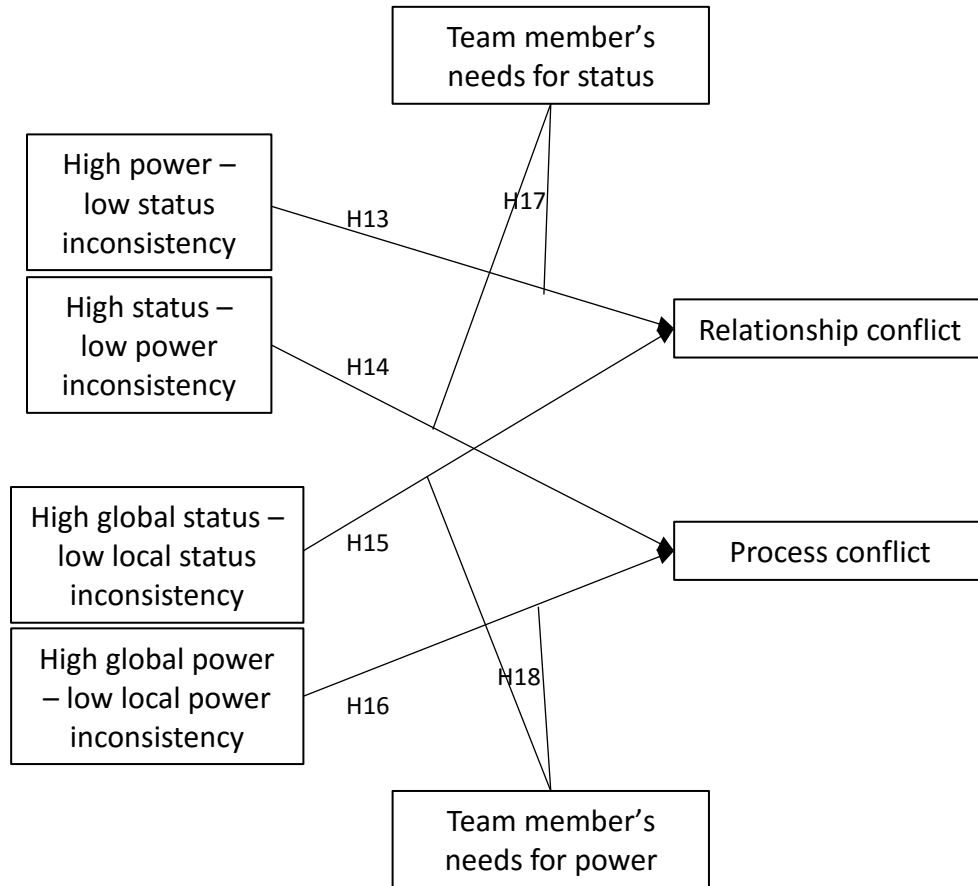


Figure 3. Global-Local Status Inconsistency and Relationship Conflict

